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THE

FLORIST AND POMOLOGIST,

AND

SUBURBAN GARDENER:

A Pictorial Magazine of Horticulture,

AND

REGISTER OF GARDEN NOVELTIES.

EDITED BY

THOMAS MOORE, F.L.S., F.R.H.S., &c.

CURATOR OF THE CHELSEA BOTANIC GARDEN; EDITOR OF "THOMPSON'S GARDENER'S ASSISTANT"; CO-EDITOR OF THE "TREASURY OF BOTANY"; AUTHOR OF "THE FERNS OF GREAT BRITAIN AND IRELAND NATURE-PRINTED," "INDEX FILICUM," "THE HANDBOOK OF BRITISH FERNS," "EPITOME OF GARDENING," ETC.

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W H Fitch, del

Rose (Noisette) William Allen Purdy 1871

THE

FLORIST AND POMOLOGIST.

ROSE WILLIAM ALLEN RICHARDSON.

[PLATE 577.]

FEW words by way of commendation are needed by this charming Noisette Rose, which was raised in 1878 by Madame Ducher, of Lyons, but of which very little seems to have been known in this country, until last summer, when it was freely exhibited by Mr. J. House, Eastgate Nurseries, Peterborough, who imported it from France in 1879, and from whom the specimens we figure, were received. The Rose as thus exhibited was of such a novel and distinctive character, that it excited quite a sensation wherever it was shown, as amongst other places at the Mansion House Rose Show on June 30th, at the National Rose Society's Show, South Kensington, on July 4th, and at the Royal Botanic Society's Show on July 5th. It is not, however, to be regarded as a "show" Rose in the usual acceptation of the term, the flowers being too small and thin, but it is a charming decorative variety for the garden, as well as invaluable for the supply of cut flowers, and especially for the manipulation of button-hole and other forms of bouquets.

The plant is a vigorous growing climber,

with handsome shining foliage, and very numerous flowers which are produced in corymbs at the ends of the shoots, and though only of medium size are very attractive on account of their beautiful orange-yellow colour shaded with saffron. In the half developed bud state they are most exquisite, the rich apricot colour, which is rather brighter on the exterior surface, rendering them particularly brilliant and attractive.

We are indebted to Mr. House for the information that it is a remarkably strong grower, blooming freely in soil which is favourable to its growth, and especially when it gets established. He adds, "I find the best way to grow it to perfection, is to plant it out in open beds, and cut back the shoots to half the growth made in the summer; this treatment will make it bloom freely. It is a strong climber, and a grand Rose of that class." Beyond this, we leave Mr. Fitch's excellent figure to speak for itself, merely adding that the variety is perfectly hardy—in America, also, according to Mr. Ellwanger—and may be grown as a climber or bush.—T. MOORE.

THE BEST TIME TO PLANT ROSES.

A GOOD deal has recently been written on this subject, though it cannot as yet be looked upon as either settled or exhausted. Very much must obviously depend on the sort of Roses to be planted. For example, the time to plant Tea Roses might not be the best to plant Hybrid Perpetuals, and the latter again might require to be planted at a different time to Summer or Moss Roses. As a matter of fact, practice varies, not only according to the Roses planted, but the locality in which they are grown. Hence, as we travel from north to south, the season of planting ought probably to be accelerated, and *vice versa*.

But apart from geographical and class reasons for modifying or altering the season of planting Roses, it may be useful to inquire

whether the usual season of planting ought not to be earlier by a month or so than that which has usually prevailed.

There seems a general consensus of opinion and agreement among practical rosarians that Tea Roses are best planted in the spring, and Hybrid Perpetuals in November. Leaving the Teas out of the question for the present, it seems probable that October would prove the better month for planting Roses in the majority of seasons. Roses moved then root sooner and more plentifully, and consequently would be better established before winter than those moved a month later. This is not simply a matter of opinion, but of fact, proved by careful observation and many experiments. Neither are the reasons for the more prompt rooting in October than in

November far to seek. The vital force of the plant is greater, its fluids more active, the earth and the air are warmer. Here we have four stimulating influences at once brought to bear upon the Rose—all forcing it to re-establish its root-hold on the earth as promptly as possible. Either of these stimulants are of immense importance, but the four combined cause the plants to advance by leaps and bounds towards their complete re-establishment in the earth.

The latter is of vital moment to the well-being of Roses. Stereotyped systems of transplanting Roses and other plants have arisen chiefly from mistaken notions about the so-called rest of plants. Winter has been too literally accepted as the dead season—a time of complete rest, or suspension of growing or vital force. Hence November or December being the months of least growth in the open air, it was assumed that these were also the best for transplanting. It is now found, however, that root-disturbance is one of the most powerful stimulators of root activity. Hardly is a Rose lifted than the severed or unsoiled roots make abnormal haste to renew their connection with the soil. The sooner, too, this connection is re-established the better for the plants. Hence the importance of planting Roses at such time, and under such favouring conditions of vital force and fluid, and of warmth of earth and air, as shall favour the immediate emission of new roots.

We now plant Roses not to rest their roots through the winter, but to push them as far and wide in their new root runs as possible. No sooner are the roots (if deep enough, or protected by surface mulchings from being severely frozen) in full activity, than the danger from transplantation is bridged over. That chiefly consists in the detachment of the roots from the soil. The later the season, the colder the soil and air, and the more sluggish and weakly the movements of the sap, the longer this critical stage of the plant is prolonged, and the greater its danger in consequence.

A good deal of confusion of thought has arisen on the theory and practice of transplantation by carrying this analogy between root and top growth too far. The semi-rest of

the top in winter, it has been too readily assumed, represents a similar rest of the roots. This is quite a mistake. There is strong evidence to prove that the late autumn and early winter months are seasons of abnormal root activity, and this especially so in all cases of root disturbance. Lift a Rose or other plant in October or early in November; it makes hosts of fresh roots at once. Defer the lifting till December or January; it roots but little till far on in the spring.

Neither do the tops rest in winter. The process of bud filling proceeds all the while, unless the fluids of the plants are frozen or nearly so. Thus the bursting of spring buds is largely the result of their slow and sure filling during winter. The two seasons and processes are less two than one only—spring but finishes what winter begins and carries on; and the bursting of tender leaves and bright flowers in the spring-tide, is but the culmination or finishing touch of the winter filling. If this be so, and there cannot be a doubt about it, the quality of the Rose-buds and blossoms, and the character of their growth, must be largely determined by the number and activity of the Rose roots during winter. Hence the vital importance of early planting on our Rose harvests, and the future health and stability of our Roses.—D. T. FISH, *Hardwick*.

PROLIFEROUS LADY FERNS.

IN a batch of young Ferns raised from spores provided by Mr. P. Neill Fraser, of Edinburgh, two distinct forms of *Athyrium Filix-femina* have appeared this season (1882) presenting the abnormal characteristics represented in the accompanying figures.

In fig. 1 the *first* frond evolved from the prothallus, besides being bipinnate and very foliose instead of having the usual uni-palmate form peculiar to seedlings of this family, bore two buds, one in the axil of a pinnule, the other in the axil of a pinnulet. These buds without any dormant period developed at once small palmate fronds and *aërial roots*, the growth being so vigorous that the roots were projected into a mound of soil raised at a distance of half an inch. The second frond produced bears four buds, which are, however, dormant, the growing season being over. In

addition to these axillary buds there is a whitish mass of apparent bud formation, in the crown of the caudex at the base of the risen fronds. The same prothallus has also

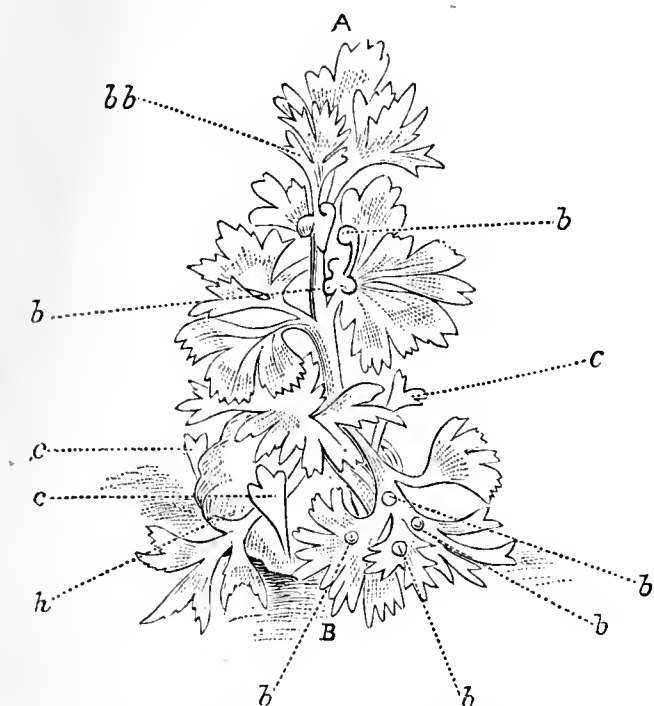


Fig. 1 (about $2\frac{1}{2}$ times enlarged).—A. first frond, B. second frond, p. prothallus, b. bulbils, bb. frond of second generation, c. independent ferns developed from same prothallus.

developed three small independent ferns from its edge; these, however, are seemingly normal, which fact, coupled with the abnormal vigour of the main plant, points to a hybrid origin of the latter.

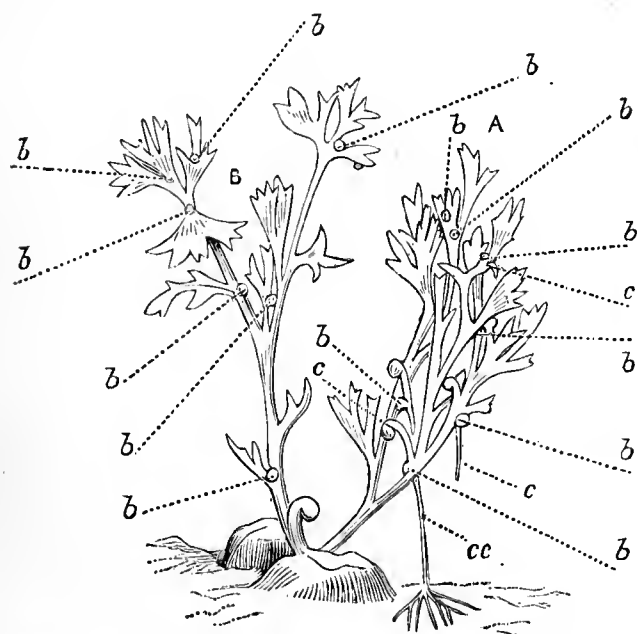


Fig. 2 (about $2\frac{1}{2}$ times enlarged).—A. first frond, B. second frond, b. bulbils, c. aerial roots, cc. root entering soil, (13 bulbils).

In fig. 2 we find an altogether different form, very depauperate and ramose. The two fronds of this have developed no less than thirteen buds, of which the majority have evolved aerial roots, one reaching and penetrating the soil. The buds in the first

frond have thrown up small circinate fronds, which have so far not unfolded.

The family of *Athyrium*, rich as it is in variations, has so far been remarkable for its non-proliferous nature. I have failed to find any record of a bulbil-bearing form. [There is the Ceylon *Athyrium proliferum*.] It is therefore singular that two forms so distinct in character, yet so alike in their proliferousness, should have originated simultaneously, and within a few inches of each other.

Finally, not the least singular feature is the extreme precocity of both forms, since bulbil-bearing ferns almost without exception are proliferous only on their ripe fronds, and when much further advanced in development.

The formation of axillary buds of this nature is a new link between the Filices and the higher forms of vegetation, as, if persistent, a shrub-like development would result.—CHAS. T. DRUERY, Windsor Road, Forest Gate.

[We have seen the plants referred to by Mr. Druery, and can testify to the general correctness of the figures and descriptions. We have not previously seen such an early production of proliferous buds, the plants themselves being advanced little beyond one stage from the prothallus.—ED.]

THE CHRYSANTHEMUM:

ITS ORIGIN AND PROGRESS.

THE Chrysanthemum, which has been adopted by the Siamese as their national emblem, has been described as being in its wild state a single yellow flower. How and when the first varieties were obtained remains a mystery. It is generally believed that Breynius was the first to describe the plant in 1689, when he named it *Matricaria japonica maxima*, and mentioned white, blush, rose, yellow, purple, and crimson varieties. It appears to have been cultivated in Japan and China for ages before its introduction to Europe.

The Dutch were the first to cultivate the small-flowered variety, which was taken by them to their establishments in Amboyna and Malabar, and figured by Rheede in 1699. It was described by Kœmpfer, in 1712, and subsequently by Thunberg in 1784, under the name of *Matricaria*. Linnæus, in 1753, noticed two species—*Chrysanthemum sinense*, with large white flowers, and *C. indicum*, with very small yellow flowers; of this latter kind there

were both double and single forms. In 1764 a plant of the small yellow variety was growing in the Apothecaries' Botanic Garden at Chelsea, but was so little prized that in a few years it was lost sight of altogether. This was, no doubt, the typical *C. indicum*; it was represented as being a dwarf branching plant about eighteen inches high, with small flowers the size of a Feverfew.

In 1789, an enterprising French merchant, M. Blanchard, of Marseilles, imported three varieties from China, the white, the purple, and the violet; only one, however, the purple, reached France alive. To him, therefore, belongs the honour of introducing the large-flowered variety into Europe. In the following year (1790), a plant of the purple variety, the first large-flowered Chrysanthemum known in this country, found its way into England; it was procured from M. Cels, a celebrated nurseryman in Paris, and was treated as a greenhouse plant. In November, 1795, it bloomed in the nursery of Mr. Colville, in the King's Road, Chelsea, and was regarded as a decided acquisition. The flowers were about the size of a carnation semi-double, of a purple colour. The success which attended the introduction of this flower, as well as its perfectly novel character, induced some of our own countrymen to seek for other varieties from China; and their endeavours were crowned with success, so that from 1798 to 1822 some thirty-six colours or varieties were introduced, there being in 1826 no less than 48 varieties cultivated in the Horticultural Society's Gardens at Chiswick, the largest collection in Europe, only fifteen varieties being known in France at that date.

Up to this time it does not appear that any attempt had been made to save seed either in France or England, but in 1830 seed was saved in the south of France, and the produce was of a totally different character from the original varieties. I am proud to state that in or about 1830 Mr. Isaac Wheeler, gardener and porter at Magdalen Hall (now Hertford College), Oxford, was successful in saving seed, and in raising seedlings. These were grown at Beaumont Buildings, in this city, and on December 2, 1832, he exhibited the same in London, where he received the Silver Banksian Medal for seedling Chrysanthemums,

supposed to be the first seedlings raised in Europe, but certainly in England. The medal and a drawing of one of the plants is still, and may be seen, in the possession of a member of the Wheeler family in Oxford. Thus it happens, that the Oxford Chrysanthemum growers have a prestige to keep up, and right heartily is it done. English seedlings were raised by Mr. Short and Mr. Freestone, in Norfolk, in 1835, about which period an amateur in Jersey turned his attention to the Chrysanthemum, and raised about 500 seedlings, which were purchased by Mr. Chandler, of the Vauxhall Nursery.

In 1838, Mr. John Salter took up his residence at Versailles, near Paris, and finding the climate of that locality suited to the Chrysanthemum, he imported from England all the Chinese varieties, and all the Norfolk and Jersey seedlings. Shortly afterwards about 250 French kinds were added, so that in 1840 his collection numbered 400 varieties. In 1843, seedlings began to be raised at the Versailles nursery, and the first fruits of many succeeding years of labour were Annie Salter, Fleur de Marie, and Queen of England. Time would fail to mention the varieties raised in this, and the few subsequent years; suffice it to observe that Prince of Wales was one of the pioneers of the incurved section, and still continues a useful variety.

In 1846 a new era in the history of this flower commenced, for at that time Mr. Fortune brought from China two small-flowered sorts known as the Chusan Daisy and Chinese Minimum. These were similar in size and appearance to the *indicum* of Linnaeus, and would probably have shared the fate of their predecessors had they remained in England, being too small to suit the taste of the English, but at the Versailles Nursery the little Chusan Daisy became a favourite. From these two have sprung all the pompons now in cultivation. In 1846 the first public exhibition of Chrysanthemums was held at Stoke Newington, the society founded there being the oldest in England. A show was also held at Portsmouth in 1849, since which date nearly every town of importance has had its exhibition, our Oxford shows dating from 1863. In 1860 Mr. Salter's collection numbered 750 distinct varieties, comprising 500 large-flowered,

of which 150 were raised in England; and 250 pompons of French origin.

In 1862, Mr. Fortune introduced several Japanese varieties, and these in twenty years have increased to nearly 200 named kinds, some collections numbering nearly 800 varieties. From 1860 to the present time, the development of new varieties and colours has been rapid; and in addition quite a galaxy of "summer flowering" sorts has appeared. Having a dwarf, free-flowering habit, these prove most useful for beds or borders or even window boxes, and often commence blooming in July or early in August. Their flowers are scarcely as compact as the later kinds; still they are useful additions to the family.

Additions have been made to our list of novelties in the form of "sports"—accidental changes in a stem or branch, either in the colour of the leaves or flowers, but more generally the flowers, and which, if secured, seldom go back to the original, but for which botanists appear at a loss to account. It is certain that some varieties are more mutable than others. For instance, Queen of England has produced five or six distinct shades of colour; Cedo Nulli three, Dr. Brock three, Bob three, Beverley two, Trevenna two, and Rose d'Amour gave us Miss Wheeler (named after our chairman's eldest daughter), and Miss Wheeler has in turn presented us with Mrs. Bateman. All of these are largely grown and retain their colours intact.

The forms generally cultivated and exhibited are the Large-flowered Incurved, Reflexed, Anemone, and Japanese, the Small-flowered Pompon or Rosette, the Pompon Anemone, and the Quilled.

The training of the plants in the convex and the pyramid form brings the entire mass of bloom at once into view, and is very attractive. The Standard, or umbrella-shaped plants, are desirable in the greenhouse as smaller subjects may be ranged round and near them. There is one form of Standard which attracts, and that is the "grafted"—a number of varieties being worked on one stem, and forming a "living bouquet." Grafting the Chrysanthemum is not a very ancient plan; indeed, we lay claim to having introduced the practice as recently as within the last twelve years, the first plant exhibited in Oxford being grown by Mr. Howlett, at the County Hall.—W. GREENAWAY, *Oxford*. (*Abstracted from Report of Lecture delivered before the Oxford Chrysanthemum Society.*)

THE HEREFORDSHIRE POMONA.

THE portion of this noble work recently issued (Part V.), and which we were accidentally prevented from referring to last month, fully maintains the high character it had already attained as an album of accurate and natural figures of the choicer sorts of Apples and Pears. The interesting introductory and miscellaneous essays which in the previous parts occupied a portion of its pages, appear to be brought to a close, and the whole of the issue is devoted to the magnificently executed plates, twelve in number, and the corresponding descriptions of the varieties figured. We here give a summary of its contents:—

Plate XXXVII. contains figures of the Golden Pippin, one of the oldest and most highly esteemed of our dessert apples; Scarlet Golden Pippin, a bud sport of the old Golden Pippin; Franklin's Golden Pippin, Hughes' Golden Pippin, and Pitmaston Golden Pippin, all dessert sorts of high quality; and Pine Golden Pippin, an excellent variety of unknown origin.

Plate XXXVIII. is devoted to Pears, and we have fine representations of Hacon's Incomparable, Zéphirin Grégoire, Winter Nelis, Chaumontel, and Napoléon.

Plate XXXIX. represents several splendid apples, namely, Red Hawthornden, Sleeping Beauty, Schoolmaster, Queen, Gravenstein, and Rymer.

Plate XL. is devoted to Pears, of which the following are represented:—British Queen, raised at Frogmore, Professeur Du Breuil, Baronne de Mello; Napoléon III., quite different from Napoléon; Colmar, Doyenné d'Alençon, Besi de Quessoy, and Olivier de Serres, the two latter small winter pears of excellent quality.

Plate XLI. includes pictures of five sorts of Apples, namely, Barcelona Pearmain, Scarlet Nonpareil, Margil, Cornish Aromatic and Cornish Gilliflower, the latter said to be the best apple that is known, if high flavour combined with rich subacid saccharine juice be the qualities we most desire.

Plate XLII.—Of Pears we have in this plate figures of five sorts: Comte de Flandre, said to be an excellent November and December pear; Bishop's Thumb, a favourite old sort; Doyenné Boussoch, good if eaten at the right moment; Figue d'Alençon, variable in merit; Maréchal de Cour, one of the finest pears in cultivation, and very handsome.

Plate XLIII.—A plate of Kitchen Apples, consisting of Hoary Morning; Gooseberry, which keeps "till apples come again"; Lemon Pippin, remarkable for the fleshy elongation which covers its stalk; Winter Colman, Green Woodcock, Striped Monstrous Reinnette, Northern Greening, and Yorkshire Greening.

Plate XLIV. gives illustrations of the following Pears:—Citron des Carnes, Beurré Capiaumont, Colmar d'Été, Fondante de Cuerne, one of the best early pears, ripe in August; and Beurré de l'Assomption, an excellent pear, larger and earlier than Williams' Bon Chrétien.

Plate XLV. introduces us to a bevy of Cider Apples, of which the following are figured:—Joeby Crab, Cummy, Kingston Black, Royal Wilding, Wilding Bitter-sweet, and Green Wilding.

Plate XLVI. illustrates a set of Perry Pears, namely, Butt, New Meadow, Parsonage, Aylton Red, Pint Pear, Pine Pear, and Arlingham Squash.

Plate XLVII.—Again Apples, the sorts figured being Benoni, a small American fruit; Fearn's Pippin; Trumpington, also American; Pearson's Plate, a delicious little dessert sort; Ord's Apple, a pleasant-flavoured sort which keeps well; and Lucombe's Pine, a first-rate dessert sort, with a pineapple flavour.

Plate XLVIII.—This plate is devoted to the following Pears:—Urbaniste, Deux Sœurs, De Maraise, Belle Julie, and Jewess, the last a delicious November and December pear.

We have given a list of the varieties figured in this part, for the purpose of showing how much of interest there is in the work, as well as to indicate the great value which a publication containing such a long series of well-executed figures must possess, for those who study the nomenclature of the fruits they cultivate or have occasion to keep up a knowledge of individual varieties. Beyond all this—its value in the library or on the writing-table of the working pomologist—the book, as we have already said, forms a beautiful album of fruit subjects worthy a place on any drawing-room table.—T. MOORE.

CHRYSANTHEMUM PROPAGATION.

YOUNG plants of Chrysanthemums should be provided each year by means of cuttings in autumn, or rooted suckers in spring, if fine heads of bloom are to be had. A month or two since some growers put in cuttings of such varieties as it was desirable to get early stock of; and those who make a trade of Chrysanthemums, must, of necessity, get to work in the direction of increasing stock as quickly as possible. When a large batch of young plants is required it is well to devote a small cold frame to the purpose of striking cuttings, placing in it a bed of good sandy soil six inches or so in depth, which should be raised a little above the surrounding level. In this bed the cuttings of the various varieties can be placed in lines, and it is quite certain that a very large number of them, if not all, will grow.

If it is not desirable to plant the cuttings in such a bed, they can be placed in pots, efficiently drained, and plunged in the frame. In either case the newly-planted cuttings should be kept rather close for a fortnight, unless the weather is close and muggy. The grower might treat the cuttings just as he would

those of the *Calceolaria*; and after they are struck, they simply require protection from frost and cold wind.

We are supposing the grower will depend on the young growths thrown up from the blooming plants for his autumn cuttings. Should he require more in spring, the best thing he can do is to plant the stock out of doors in a sheltered position, and in spring they will supply plenty of cuttings to replace any failures, or to add to the stock.

During January, cuttings of any scarce sorts can be put in as they can be obtained; and soil and pots should be got ready to pot off any of the young-rooted plants as early as it can be done.—R. DEAN.

COSMOS BIPINNATUS.

HOW many of those persons who attended the meeting of the Royal Horticultural Society on December 12, recognised this old plant in the blooming specimens sent up from Chiswick by Mr. Barron? One might almost term it a pale rosy-purple flowered Single Dahlia. It is a plant of rather tall and somewhat loose growth, but one flowering freely in autumn and winter. Mr. Barron states that the plants shown on this occasion were raised from seeds sown in the spring, the plants being brought on during the summer, and bloomed as already set forth. The flowers are of a very pleasing hue of colour, and are very acceptable in a cut state at this dull season of the year.

The subject of the foregoing paragraph is a tender annual. The seeds germinate without difficulty in a warm place, and the plants flower freely during the summer when planted out of doors in suitable soil.—R. DEAN, *Ealing*.

FRUITS FOR NORTH WALLS.

IN some gardens north walls are not made the most of, since a few Morello Cherry-trees and Currants occupy the greater portion of the surface; these no doubt are useful fruits, and succeed well on north walls, but should not occupy the whole space, as many of our best dessert Cherries do exceedingly well, and hang on much longer than on any other aspect, if they are well protected from birds.



Pomme de terre d'Amantia panachée

Many kind of Plums, as the Victoria, Kirke's, Jefferson, Green Gage, and many others, succeed admirably on north walls. Such sorts as are late in ripening, as the Washington, should not, however, be planted against a north wall. Plum-trees on north walls sometimes bear heavy crops of fruit when others on more forward aspects produce but little, for being later in coming into bloom they often escape the severe frosts in spring. The fruit from trees on north walls prolongs the season, as they are later in ripening and hang longer. The wasps, moreover, do not attack them so soon as they do those on other aspects.—M. SAUL, *Stourton Castle, Yorkshire*.

PEAR BEURRÉ D'AMANLIS PANACHÉE.

[PLATE 578.]

AMONGST Pears there are few that have secured a better reputation than has been accorded to the Beurré d'Amanlis. It is large, handsome in appearance, and of fair quality; it comes into use amongst the earlier varieties in September, and at that season has no equal; and it is an almost certain cropper. Very rarely indeed does a season pass without a crop of Beurré d'Amanlis; consequently it has found much favour with the market growers. Mr. Dancer, of Chiswick, grows it extensively—a pretty good criterion of its worth—and finds it to be one of the most profitable sorts. The tree is a very free and somewhat strong grower, and succeeds well on the Quince—so well indeed, that it is used as the intermediate stock for those varieties that do not themselves take freely on the Quince.

The subject of our notice is the striped (*panachée*) form of the good Beurre d'Amanlis. It is in every respect the same, excepting that it is far more beautiful; the broad bands or streaks of yellow and rosy orange, so well shown on the plate, are exceedingly charming and pretty. This variegation is not uncommon, every fruit being more or less marked, and remaining so until quite ripe. It is exceedingly handsome for the exhibition or dinner-table, and should be grown in preference to the ordinary form. Portions of the young shoots are frequently striped in the same

manner; very rarely the leaves. The specimens figured are somewhat smaller than ordinary, and the leaves much smaller. It is grown at Chiswick.—A. F. B.

ANEMONES AS ANNUALS.

THERE is at least one species of Anemone which succeeds thoroughly well when grown as a hardy annual. Near the sea, and on rich light soils in upland localities, *A. coronaria*, the Crown Anemone as it is sometimes called, succeeds perfectly when its seed is sown in March, or even as late as the middle of April. We are now, November 8th, gathering beautiful flowers and buds from beds of seedlings sown on April 3rd of the current year.

All Anemones like deep rich sandy soil, and when manurial stimulants are resorted to, cow-dung is the thing that Anemones most enjoy. In some gardens where the Anemone would never succeed, we have recommended this manure to be placed an inch or two below the tubers at planting time, or beneath the bed on which the seeds are sown, and success has been at once obtained.

The first step in the culture of the garden Anemone as an annual is to obtain seed from a good strain of double and semi-double varieties. The best of Anemone seed is very rarely for sale; the Continental people who cultivate this flower doubtless find the sale of tubers, to which some fancy name is attached, far more profitable than the sale of the seed which yields them so quickly and so readily. If possible obtain a bit of good seed from some friend who makes Anemone culture a speciality. If this is not easy, purchase a couple of dozen named tubers, the finest in size and colour that are obtainable, and commence by saving every bit of seed that ripens. In this way some good sorts will be gained, and selection and seed saving only from the very finest flowers will do the rest.

At this dull wintry season, and early in the spring months, we have no hardy flowers that approach the garden Anemone in vivid colour, and now they are most lovely as cut blooms arranged in contrast along with white Chrysanthemums such as *Sœur de Melanie*, *Trevénna*, *Elaine*, *Mrs. G. Rundle*, and others, and if they are cut in the early bud-stage of

their existence, soon after the sepals show colour, they endure fresh and fair for from ten to fifteen days, if the water be changed occasionally. A fully exposed breezy position suits them best; indeed recent gales, which have destroyed all late blooming hardy plants, seem to have given additional vigour to the Wind-flowers.

A bed of seedling Anemones, as seen on a bright spring day, is most bright and cheery: scarcely two flowers are alike, and all are beautiful. I cordially advise the culture of seedling Anemones to all who have to provide flowers for cutting at all seasons.—F. W. BURBIDGE, *College Botanic Garden, Dublin.*

REGISTER OF NOVELTIES.

NEW PLANTS.

ALPINIA MUTICA, *Roxburgh*.—A stately stove perennial of the Scitamineous order. It sends up several tall simple leafy stems, six to eight feet in height and formed of the compressed sheathing leaf-stalks, the leaf-blades being smooth sword-shaped and about two feet in length. The large and exceedingly beautiful flowers form a spike-like raceme at the top of the stem, on which the flowers grow in pairs; they are obliquely funnel-shaped, the segments bluish-white, the large conspicuous lip bright yellow beautifully veined and speckled with crimson, the mouth oblique and beautifully crispulate; introduced from Borneo.—W. Bull.

ANTHURIUM FERRIERENSE, *Devansaye* (*Rev. Hort.*, 1882, 476).—A handsome new Aroid, obtained by crossing the scarlet-spathed *A. Andreanum* by the white-spathed *A. ornatum*. The new hybrid is of vigorous growth, and very floriferous, resembling *A. ornatum* in having the leaves rounder and less cordiform than in *A. Andreanum*; the spathe is of a beautiful rose colour, the spadix erect, white, the tip at length becoming orange-yellow; raised at Ferrières, the seat of Baron A. de Rothschild, and exhibited at the show of the Société Centrale d'Horticulture de France in October last.—M. Bergman.

COSMOS BIPINNATUS PURPUREUS.—A revival rather than a novelty. It is a fine old and very useful autumn and winter flowering plant, blooming very freely at this season of the year in an ordinary greenhouse, and yielding a quantity of pale pinkish purple composite flowers, very much resembling small Dahlias; 2nd-class Certificate R.H.S., Dec. 12.—R.H.S. Gardens, Chiswick.

CRATEGUS CARRIÈRI, *Hort.*.—A very handsome hardy tree raised from *C. mexicana*, to which it is much superior. The flowers when they expand in spring are white, but subsequently become flesh-coloured. These are followed by fruits, which resemble cherries in size, form, and colouring, being of a bright red; their chief merit, however, consists in their being persistent through the winter, when the leafless boughs laden with orange or crimson fruit have a very ornamental appearance. The tree is very hardy, having withstood the winter of 1879-80 unhurt. It is grafted on the hawthorn.—MM. Baltet frères, Troyes. [*C. mexicana* has greenish-yellow fruits.]

CYPRIPEDIUM MONTANUM, *A. Gray*.—A beautiful little hardy Orchid from Oregon; grows about a

foot high, and has lanceolate pubescent leaves, and brownish-purple flowers with a white lip, striped with red inside, the column yellow spotted with crimson.—T. S. Ware.

DENDROBIUM RIMANNI, *Rehdb. f.* (*Gard. Chron.*, N. S., xviii., 680).—A stately Dendrobe in the way of *D. Mirbelianum*, and bearing flowers equal to those of a good *D. speciosum*. The furrowed stems are cylindric-fusiform, leafy above, the leaves oblong $3\frac{1}{2}$ inches long, and very coriaceous like those of a *Cattleya*. The flowers grow in terminal racemes, which are somewhat zig-zag; the sepals and petals are yellow, the former striped with purple outside; the lip white, marked with purple reticulations. Native of the Moluccas.—F. Sander.

FALLUGIA PARADOXA, *Endlicher* (*Bot. Mag.*, t. 6660).—A very neat-growing and pretty Rosaceous subshrubby plant, of branching habit, allied to *Geum*, and found in the dry interior regions of N. W. America, in Utah and Nevada, but chiefly in New Mexico. It is a slender bush, much branched, 2—4 ft. high, with the leaves, which are bright green above, white beneath, collected in fascicles, small, cuneate, flabellately and pinnately cut into linear obtuse lobes; the flowers are pure white, an inch and a half across, arranged in a loose raceme or sometimes solitary at the ends of the branchlets. Flowered at Kew.

GRAMMATOPHYLLUM ELEGANS, *Rehdb. f.* (*Gard. Chron.*, N. S., xviii., 776).—A new and elegant species of a somewhat limited genus of Orchids, recently introduced from the South Sea Islands, and closely allied to *G. Fenzlianum*. It has largish oblong pseudobulbs, with elongate distichous leaves, and an erect peduncle, a foot high, bearing six or seven flowers, which are showy, having oblong sepals of a sepia brown with ochre yellow margins, the narrower petals being of the same colour, and the lip yellow with brown markings in front and a hairy disk, trifid, the front lobe wedge-shaped and emarginate. The column is white with a pair of brown lines below the stigma.—B. S. Williams.

LASTREA HOPEANA, *T. Moore* (*Gard. Chron.*, N. S., xviii., 744).—A very elegant stove evergreen fern, with a slender glabrous stipes, and ovate or subdeltoid fronds a foot long and eight inches wide. These fronds are thin in texture, pinnato-pinnatifid, the sessile lanceolate caudate pinnae being cut down nearly to the rachis into narrow ligulate falcate acute segments. The veins are simple and close set, and bear small sori close to the midrib. Its slender stipes, thin texture, caudate extremities, and narrow falcate lobes give it an elegant character, which must render it useful for decoration. Native of the South Sea Islands and Fiji.—Veitch & Sons.

LASTREA PROLIFICA, *T. Moore* (*Gard. Chron.*, N. S., xviii., 744).—An interesting ornamental hardy evergreen fern from Japan. The fronds are rigid, deltoid, bipinnate, deep green, with the pinnae rather distant, obliquely ovate-lanceolate, the posterior side most developed; the pinnales are unequal in size and form, but usually linear acute, and somewhat falcate. These bear numerous large reniform sori, which are distributed over the whole back of the frond, and are covered by prominent indusia which are red in the centre with a lead-coloured margin. The fronds are gemmiparous in the axils of the segments and on the margins. It appears to be known as *Lastrea Fortunei*, an unpublished name; and is the *Aspidium prolificum* of Maximowicz.—Veitch & Sons, and W. Bull.

PESCATOREA VERVAETI, *Hort.*.—A pretty species of this remarkable genus, with the habit and general aspect of *P. klabochozum*, but apparently producing smaller flowers; their sepals and petals are of a waxy white boldly tipped with claret-crimson, the lip being entirely of the latter colour; 1st-class

Certificate R.H.S., December 12.—M. Vervaeet & Co., Ghent.

PHALLENOPSIS SPECIOSA, *Rehb. f. (Gard. Chron., N. s., xviii., 745, figs. 130—32).*—A fine tropical epiphyte of considerable beauty, allied to *P. tetraspis* and *P. Lüddemanniana*. It is stemless with flattened roots, light green leaves, and racemes of charming flowers which have a white ground with large transverse blotches and streaks of rosy-purple (rose-madder) but variable, some plants being much blotched with deep purple showing little white, others having bars of rosy purple with white spaces between. The following varieties are distinguished:—

P. SPECIOSA IMPERATRIX, *Berkeley.*—This has rosy-purple flowers without white markings on the sepals and petals; there are two yellow spots on the side lobes of the lip and the column is white; very rare.

P. SPECIOSA CHRISTIANA, *Berkeley.*—A charming variety in which the flowers are not blotched, but the sepals and column are rosy-purple, and the petals are pure white. The flowers of this are rather smaller but more abundant.—Lieut.-Col. Berkeley.

POLYSTICHUM VESTITUM GRANDIDENS, *T. Moore (Gard. Chron., N. s., xviii., 776).*—A variety of the Australasian *P. vestitum*, in which the pinnules are changed so as to resemble those of the British *P. angulare grandidens*. The fronds are lanceolate or ovate, the apex extended and proliferous; they are bipinnate, the pinnules usually cuneate or obovate, with incised-dentate margins. A very elegant plant, with unsymmetrical development. It was raised at Singleton Park, Kendal, about seven years ago, and is quite constant.—D. Anderson.

SPIRÆA BULLATA, *Maximowicz (Gard. Chron., N. s., xviii., 680).*—A very pretty dwarf-growing shrub, likely to be highly esteemed for planting on rockeries, or amongst choice shrubs. It grows 12—18 inches high, with erect wiry reddish-brown downy branches, furnished with subsessile glabrous dark green leaves of a leathery texture, half an inch long, ovate-oblong in outline, and crenate at the margins. The flowers are abundantly produced in dense terminal corymbs, and are of a deep rosy-lilac, the petals continuing to grow after the evolution of the stamens. It is of Japanese origin, and has the aspect of a dwarf form of *S. japonica*, the *S. Fortunei* of gardens. Maximowicz thinks it may be an Alpine species.—Rodger, McClelland & Co.

TRICHOMANES HARTII, *Baker (Gard. Chron., N. s., xviii., 680).*—A new film-fern related to *T. rigidum*. The caudex is short, suberect, with tufted stipes winged above, and deltoid tripinnatifid dark green fronds having a few fibrillose paleæ on the midrib of both surfaces; there are 8—12 pairs of pinnæ of which the lowest are much produced on the posterior side; the ultimate segments are oblong obtuse. The sori, with narrow funnel-shaped truncate involucre, and much exserted receptacles, are usually placed one on each secondary segment, except in the deeply pinnatifid larger divisions of the lowest pair of pinnæ. Found by Dr. W. H. Hart at Sierra Leone, and grown by Mr. Burbidge, of the College Botanic Garden, Dublin.

VRIESEA PSITTACINA MORRENIANA, *E. Morren (Belg. Hort., 1882, t. 10—12, fig. 3; not fig. 2 as inscribed).*—A very fine hybrid Bromeliad, raised between *V. psittacina* and *V. brachystachys*, and of which Mr. Morren in the work above quoted records several varieties, under two groups distinguished by their remote and approximate flowers. The new hybrid is a very handsome plant, with shining green recurved leaves, and a tall scape clothed with green-tipped red bracts, supporting a moderately close distichous spike of fourteen flowers, which are yellow, with the tips of the protruded petals green, and

emerge from bracts as long as the calyx and very persistent, which are scarlet at the base, yellowish upwards with green tips; raised by M. Strœmer at the Chateau de St. Gilles, Belgium.

VRIESEA RODIGASIANA, *E. Morren (L'Illust. Hort., t. 467).*—A Brazilian Bromeliad of considerable beauty. The radical leaves are short arcuately-spreading, with distended sheathing bases, loriform and roundly-cuspidate, smooth and of a green colour. The scape is tall and slender terminating in a lax panicle of large showy flowers the rachis flushed with red and yellow, and the branches of the panicle subtended by an ovate lanceolate scarlet bract. The flowers are 1½ inch long, tubulose yellow, distichously arranged on a zigzag rachis, and somewhat remote. The whole arrangement is elegant and the plant effective.—Compagnie Continentale d'Horticulture.

NEW FLOWERS.

ALPINE AURICULAS.—The following are being sent out by Mr. C. Turner:—*A. F. Barron*, yellow paste, quite circular, rosy mauve shaded with maroon, fine; 1st-class Certificate R.B.S. and R.H.S. *Duchess of Connaught*, fine, circular white paste, rich reddish maroon, shaded with rosy violet; 1st-class Certificate R.B.S. *John Ball*, fine, rich dark crimson, bright yellow paste, quite circular, very smooth and flat, large truss; 1st-class Certificate R.H.S., R.B.S., and Crystal Palace. *Mrs. Phipps*, good circular white paste, maroon ground, shaded with violet, smooth and fine. *Mrs. Thomson*, bright crimson, good bright yellow paste, large and fine; 1st-class Certificate Crystal Palace. *Philip Frost*, a beautiful shaded variety, very smooth, good white paste, and the eye quite circular; 1st-class Certificate R.B.S. *President*, bright crimson, pips large and smooth, good large bold truss. *Sensation*, maroon, slightly shaded, fine; 1st-class Certificate Crystal Palace. *William Bragg*, very dark maroon, large flat pips, quite circular, and good truss; 1st-class Certificate Alexandra Palace.—C. Turner.

CHRYSANTHEMUMS (JAPANESE).—*Agréments de la Nature*, a very distinct and striking variety, the flower-heads formed of a mass of bright gold small thread-like florets, very pleasing; 1st-class Certificate Hackney Chrysanthemum Show, November 15, 1882.—Messrs. S. Dixon & Co. *Ceres*, a large variety, with long broad ribbon-like florets, and slight primrose centre, a form intermediate between Fair Maid of Guernsey and Meg Merrilees, and valuable on account of its late blooming; 1st-class Certificate R.H.S., December 12, 1882.—T. Jackson & Son. *Duchess of Albany*, a fine and distinct variety in the style of Madame B. Rendatler, with plenty of small florets of the Dragon type, of a golden colour, tipped and suffused with reddish brown; an excellent late blooming variety; 1st-class Certificate R.H.S., December 12, 1882.—T. Jackson & Son. *Japon Fleuri*, dark maroon with crimson and golden centre, very fine and distinct; 1st-class Certificate Hackney Chrysanthemum Society, Nov. 15, 1882.—Messrs. S. Dixon & Co.

The following new JAPANESE varieties are being sent out. By Messrs. James Veitch & Sons, Chelsea:—*Bend Or*, bright sulphur-yellow, large and fine. *Comet*, crimson and gold. *Comte de Germiny*, bright nankeen yellow, occasionally striped with crimson, distinct and fine. *Delicatum*, pale lilac suffused with white, a fine and pleasing light variety. *Kämpfer*, bronzy red and yellow, fine large flower. *Lucifer*, deep cinnamon-red, the reverse of the florets gold. *Lord Beaconsfield*, reddish-cerise. *Mary Mayor*, pure white. *Rex Rubrorum*, crimson maroon. *Thunberg*, soft primrose-yellow, large and attractive.—By Messrs. T. Jackson & Son:—*Ile Japonaise*, pale lilac, purple, and pink, with slight golden centre. *Perle des Blanches*, white, with broad florets, in the

way of Fair Maid of Guernsey, but distinct from it. *Safrano*, creamy blush, with pale golden centre, and an exterior circle of long-spreading florets, large, full, fine, and distinct.—By Messrs. S. Dixon & Co., Hackney:—*Albert*, reddish crimson, flushed with bright red. *Alexandre Dufour*, brilliant violet, the reflex dark violet, rich in tint, and very distinct. *Beauté de Toulouse*, pure shining whitish rose, very large and double. *Chinaman*, brilliant violet purple, the centre silvery white, extra fine. *Etoile Forel*, gold and reddish bronze, large and full. *Etoile Toulousaine*, flowers very large and double, red drooping florets curled and twisted, and when incurved forming a golden ball, dark yellow in the centre. *François Delaux*, crimson red and violet brown, a very fine and distinct variety. *Général Lartigue*, brilliant flame colour, reverse of the petals golden yellow, very fine. *J. Delaux*, one of the largest and most double varieties grown, dark brown crimson, brilliantly flamed, extra full. *J. Hillier*, rich amaranth spotted with violet, long curling drooping florets, extra fine. *La France*, crimson bronze, lit up with flame colour. *Mlle. Louise Sabatie*, bright violet rose, lit up with white, very large, double and distinct. *Mr. J. Starling*, rosy lilac, shaded white, the centre dark crimson, a very striking and distinct variety. *Petit Frisi*, soft rosy earmine, centre gold and the purest white, quite unique and distinct. *Petit Norbert*, rosy carmine shaded with silver, bordered with pure nankeen yellow, reverse golden yellow; very pretty. *R. Ballantine*, rich carmine violet, very fine and distinct. *Source d'Or*, orange and shaded gold, dotted with dark yellow; very fine and distinct. *Souvenir d'Amélie*, pure white, pounced and shaded rosy violet; very pretty. *Venus*, violet, reverse of florets silvery white, dwarf habit, distinct.

CHRYSANTHEMUM (POMPON) *La Pureté*, a late blooming white Pompon, bearing a great profusion of good-sized compactly-formed heads of white florets of fine shape; a capital variety for decorative and exhibition purposes.—T. Jackson & Son.

PELARGONIUM (IVY-LEAVED) *Albert Crousse*.—A strong growing and superb variety of compact habit, remarkable for its large double flowers of a rosy-scarlet colour; a very distinct and desirable flower on account of its colour; 1st-class Certificate R.H.S., Nov. 14.—H. Little, Esq.

PELARGONIUM (ZONAL) *Mrs. Gordon*, rich pale scarlet, very large trusses, pips of immense size and of the finest form; 1st-class Certificate R.H.S., November 14, 1882.—H. Cannell & Son.

PELARGONIUM (DOUBLE ZONAL) *Aglaia*, close compact habit of growth, fine and bold trusses of large full and striking purplish-erimson flowers; very free and extra fine; 1st-class Certificate R.H.S., November 14, 1882.—H. Little.

PICOTEES.—The following are sent out by Mr. Turner:—*Constance Heron* (Fellowes), a fine large flower, moderately full, good broad smooth petals, very heavily margined with bright scarlet, quite distinct, extra fine; 1st-class Certificate at the National Carnation and Picotee Society. *Evelyn* (Fellowes), light-edged rose, full size, good broad smooth petals, the white quite pure, extra fine. *Muriel* (Hewitt), broad purple edge, fine large petals, smooth and of great substance, extra fine.

NEW FRUITS.

APPLE, *Double Bon Pommier* (Rev. Hort., 1882, 336, with coloured plate). A very handsome Apple raised by M. Dubois, Landrecies, and according to M. Carrière not previously described. The fruit is large and roundish, sometimes slightly ribbed; stalk very short, scarcely extending beyond the basin; eye open with long spreading calyx lobes; skin golden yellow, tinted on almost all sides, even before ma-

turity, with brilliant red, sometimes slightly striped with blood-red. Flesh firm, white, luscious, finely and agreeably scented. The tree is vigorous and very fertile; the leaves broadly and shortly oval, cuspidate, with red petioles.

GRAPE, *Henab Turki* (Rev. Hort., 1882, 360, with coloured fig.).—A vigorous growing, long jointed variety, with coarsely toothed leaves, and loose bunches of large berries, which are ellipsoid or shortly ovoid, of a greenish white passing to bright rose and then to deep rose; flesh firm, crackling, juicy and sweet, with an agreeable flavour. M. Pulliat, who received it from M. Rousseau, gardener to M. Cicolani, at Cairo, speaks of it as second rate in quality, but adds, "its beautiful bunch embellishes a dessert well."

GRAPE, *Violet Kechmish Ali* (Rev. Hort., 1882, 480, with coloured fig.). A variety which comes so near to the Frankenthal (Black Hamburg) that it has been given as a synonym. M. Pulliat, however, states that the leaves pass to red before falling, whereas those of the Frankenthal remain yellow up to the time of falling, and that by this character the two sorts may be distinguished. We learn from Mr. Barron that even the leaves of Frankenthal sometimes assume a reddish tinge before they part from the vine, and if so, the character fails as a distinctive mark. The fruit of the two sorts is stated to have the same characters and the same qualities,—conico-cylindrical bunches, large spherical berries, juicy sugary agreeably flavoured flesh, and a thickish skin, passing from violaceous red to pruinose black.

PEACH, *Belle Henri Pinault*.—A variety highly spoken of by Continental growers. In its form and colouring the fruit recalls the Grosse Mignonne, but the sunny side has more of a purple tint, and is more velvety. The flesh is very juicy and melting, separates freely from the stone, and is sugary with a rich flavour. Some of the fruit presented last September, by M. Gustave Guyot, of Montreuil, to the *Société Centrale d'Horticulture de France*, were regarded as being very fine specimens, and decided to be of excellent quality. The variety is a stray seedling found in a bed of Pæonies.

NEW VEGETABLES.

BEAN, *John Harrison*.—A very fine new early long-podded Garden Bean, extremely fertile, of hardy constitution, growing about two feet high, and of branching habit; pods numerous, large and well-filled, each containing six to eight beans. One of Mr. Laxton's seedlings, obtained by crossing the Mazagan with the Aguadulce, one of the finest types of the Seville Long-pod.

PEA, *Evolution*.—A splendid mid-season variety, the offspring of a cross with Omega, three to four feet in height. It has very large and handsome deep green pods, frequently containing eleven or twelve peas, of high quality, and coming in before Omega. Raised by Mr. Laxton, who speaks of it as "the largest and finest podded pea with well-filled pods, yet issued."

POTATOS.—*Alderman*, a large long flat white kidney, the product of a cross between Early Rose and Early Market; remarkably fine and handsome, heavy cropper, and excellent quality; haulm medium height and spreading; an early second crop.—R. Dean. *Main-crop Kidney*, the produce of a cross between Magnum Bonum and Paterson's Victoria, combining the best qualities of both with greater disease-resisting powers, and a higher rate of productiveness.—James Clark. *Pride of the Market*, a seedling from the same cross as the foregoing, of compact habit of growth, very productive, and of excellent table quality. This and Main-crop Kidney greatly resemble Magnum Bonum, the latter especially.—James Clark. *Standwell*, a thoroughly first-rate

variety, a robust grower, the haulm standing up well, like that of Magnum Bonum; a white kidney, broad tubers, a heavy cropper, splendid table quality, and a good keeper; a cross between Vicar of Laleham and Woodstock Kidney. This should displace all inferior main-crop varieties.—R. Dean.

NEW PUBLICATIONS.

The GARDENERS' CHRONICLE (Nov. 25—Dec. 16) contains descriptions of *Trichomanes Hartii*, Baker (p. 680), a new species from Sierra Leone, introduced by Dr. W. H. Hart. It is allied to the least divided form of *T. rigidum*, especially *T. Boivinii*, and has tufted stipes, deltoid tripinnatifid fibrillose fronds, with the ultimate segments oblong-obtuse, and the sori placed on exserted receptacles in narrowly funnel-shaped involucre, which are truncate, not dilated at the mouth.—Trinity College Botanic Garden, Dublin. *Spiraea bullata*, Maxim. (p. 680), a very pretty dwarf shrub, 12—18 inches high, with erect wiry branches clothed with reddish down, subsessile glabrous ovate oblong crenate leaves, half-an-inch long, and dense terminal corymbs of rosy-lilac flowers.—Rodger McClelland & Co. *Odontoglossum marginellum*, Rehb. f. (p. 680), a curious species in the way of *O. angustatum* and *O. tetraplasium*, with light ochre-coloured flowers, the lanceolate sepals and petals as well as the column marked with brown spots, the lip blackish red-brown, with a yellow front edge and yellow tips to a few of the calli.—Dr. Wallace and Dr. Boddaert. *Dendrobium Rimanni*, Rehb. f. (p. 680), a stately Dendrobe from the Moluccas, with cylindrate-fusiform stems, broad oblong very leathery leaves, and zigzag racemes of yellow flowers, having a white lip with purple reticulations.—F. Sander & Co. *Phalanopsis violacea Schrederiana*, Rehb. f. (p. 680), a variety in which the flowers are large and more brilliantly coloured than in the type. The lower half of the sepals and petals is covered with broken purple-mauve lines.—Veitch & Sons. *Pinus latisquama*, Engelmann (p. 712, fig. 125), a new Pine from the mountains south of Saltillo, Mexico, and belonging to the group of Pinasters. The leaves, which are short, very slender and serrulate, grow in fives, and the cones are ovate-cylindrical, 3 inches long, with very broad obliquely rhomboid shining chestnut-brown scales. It is most nearly allied to the cembroid or nut-pines. Discovered by Dr. E. Palmer, in 1880. *Eucharis Sandèri* (p. 712), a bulbous stove plant likely to prove ornamental and useful. The flowers by comparison with the older kinds have a shorter tube, and a less spreading limb to the perianth, while the corona is almost suppressed.—F. Sander & Co. *Calanthe bracteosa*, Rehb. f. (p. 712), a terrestrial tropical Orchid from the Samoan Islands and Viti. The long-petioled leaves are oblong-lanceolate; and the hairy peduncle supports a rich spike of slender-spurred white flowers, remarkable for the free development of the bracts, which equal or overtop the flowers.—Compagnie Continentale d'Horticulture. *Pellionia Daveauana viridis*, N. E. Brown (p. 712), like the type, except in having the leaves of a uniform bright green; from Cochin China. *Pellionia pulchra*, N. E. Brown (p. 712), a creeping stemmed stove plant from Cochin China, with alternate petiolate stipulate obliquely-oblong obtuse leaves, which are blackish along the mid-rib and veins, the interspaces being green, affording a pretty variegation.—Compagnie Continentale d'Horticulture. *Pteris serrulata Cowani*, T. Moore (p. 744), a dwarfish variety of the crested form of *P. serrulata*, remarkable for its ramose stipes, its short oblong blunt-ended multifid branches, its flabellately-crested pinnæ, with one or two pinnules on the posterior side of the lower ones.—J. Cowan. *Lastrea Hopeana*, T. Moore (p. 744), an elegant

South Sea Island Fern, growing 1½ to 2 feet high, with slender stipes, the fronds ovate or subdeltoid in outline, pinnato-pinnatifid, the fronds and pinnæ caudate, the latter cut deeply into narrow evenly-set segments; a graceful stove fern, useful for decorative purposes.—Veitch & Sons. *Lastrea prolifica*, T. Moore (p. 744), an interesting and ornamental hardy evergreen fern, with coriaceous dark green deltoid bipinnate fronds, in which the pinnules are usually linear acute and somewhat falcate, but are apt to vary. The under surface bears throughout large sori which are red-centred with lead-coloured margins, and the upper surface gemmiparous in the axils of the segments and on the margins. From Japan.—Bull and Veitch & Sons. *Phalanopsis speciosa*, Rehb. f. (p. 775, figs. 130—132), one of the pretty small-flowered species, allied to *P. tetraspis*; it has white flowers blotched and streaked with rosy purple. There are some varieties as *P. s. imperatrix*, Berkeley, a form with deep rosy purple flowers, having the two side lobes of the lip yellow, and the column white; and *P. s. Christiana*, Berkeley (fig. 131), with the sepals and column rosy purple, and the petals white. All the varieties are sweet-scented. *Polystichum vestitum grandidens*, T. Moore (p. 776), a rather striking variety of a fine evergreen greenhouse fern. It was raised by Mr. Anderson, at Singleton Park, Kendal, and has lanceolate or ovate fronds with a narrowed and extended apex; the bipinnate fronds have the pinnules unequal, but for the most part cuneate or obovate with the edges inciso-dentate, as in the British *P. angulare grandidens*; the fronds are also proliferous at the apex; a distinct and interesting variety. *Agave bracteosa*, S. Watson (p. 776, figs. 138—139), a stemless Agave, with a rosette of 10—15 lanceolate or broadly-linear fleshy greyish-green leaves 18 to 22 inches long, narrowed gradually to the herbaceous point, and serrulate with cartilaginous teeth at the edge. The flower stem grows about 3 feet high, of which about half consists of a dense spike of small short-tubed flowers which grow in pairs, and amongst which the bracts are conspicuous. Found near Monterey by Dr. E. Palmer.—Cambridge Botanic Garden, U.S. *Grammatophyllum elegans*, Rehb. f. (p. 776), a very elegant species from the South Sea Islands, near G. Fenzlium, the pseudobulbs in the way of those of *G. multiflorum*, the peduncle erect, a foot high, with seven fine flowers of which the oblong rounded sepals are sepia brown with light yellow edges, the smaller petals of similar colour, and the lip ochre with the front edge brown.—B. S. Williams. *Lælia amanda*, Rehb. f. (p. 776), a very fine Orchid, with thin fusiform bulbs, euneate ligulate acute leaves, and handsome flowers growing in pairs. The sepals are oblong ligulate, the petals broader and wavy, both of a light rose, with darker tinted nerves at the base of the latter; the lip with a cordiform base, which covers the base of the column, trifid in front, and of a rich dark purple, the disk marked with a very rich purple venation; it is doubtless of hybrid origin.—Bull. *Lælia monophylla*, N. E. Brown (p. 782), the West Indian *Trigonidium monophyllum*, a remarkable plant, with a single leaf and a slender one or two-flowered peduncle bearing an orange-scarlet flower, about as large as a florin, the lip remarkable for its very small size.—Kew.

The BOTANICAL MAGAZINE for December contains:—*Hamamelis japonica*, Siebold et Zucc. [t. 6659], a hardy Japanese deciduous shrub; it has obovate-elliptic sinuately-toothed strongly-nerved leaves, and rather attractive flowers, which appear on the leafless twigs in spring in close globose heads, and consist of a revolute dull-red calyx, and long strap-shaped wavy golden-yellow petals, which render the leafless boughs really attractive and ornamental.—Veitch & Sons. *Fallugia paradoxa*, Endlicher

[t. 6660], a charming little bushy-habited suffrutescent plant, with cuneate pinnate or flabellate leaves, and large white rosaceous flowers; native of New Mexico.—Kew. *Androsace foliosa*, Duby [t. 6661], a neat herbaceous perennial, with a woody rootstock, short red stems, elliptic oblong leaves, and many-flowered umbels of pale flesh-coloured flowers half-an-inch in diameter; native of the Western Himalayas at 8—12,000 feet elevation.—I. Anderson-Henry, Esq. *Oncidium prateum*, Reich. f. [t. 6662], a pleasing epiphyte from Brazil, with oblong pseudobulbs, ensiform leaves, and a panicle of yellow and brown sweet-scented flowers, the sepals yellow blotched with brown, the petals twice as large, wholly brown, and the lip broad fan-shaped, golden yellow with an even margin of brown.—Kew. *Hyacinthus fastigiatus*, Bertolini [t. 6663], a small hardy bulb, not very attractive, but interesting on account of its scilla-like aspect, though it is a true Hyacinth. The small ovoid bulbs produce three or four smooth subulate leaves, and a raceme of some six or seven bright lilac flowers on scapes which are shorter than the leaves; native of Corsica and Sardinia; Kew.—Rev. H. Harpur-Crewe. *Mesembryanthemum Bolusii*, Hook. fil. [t. 6664], a remarkable-looking South African succulent, allied to *M. truncatellum*. The plants consist of an angular obconical mass of vegetable matter of a greyish-green colour, consisting of a pair of subhemispherical obscurely three-angled leaves from between which issue one or two sessile flowers, two inches in diameter, the petals of which are almost filiform and very numerous, yellow on the lower half, dull red beyond. The flowers open by five o'clock.—J. T. Peacock, Esq. This number, which concludes the annual volume, contains a dedication to G. Joad, Esq., F.L.S.

LA BELGIQUE HORTICOLE (Aug.—Sept.) contains coloured figures of *Cypripedium Argus*, Rehb. f. [t. 9], a peculiar and handsome form of Lady's Slipper, inhabiting the Philippine Islands. The leaves are chequered with light and dark green, and the white green-lined dorsal sepal and the petals are, the former lightly spotted the latter heavily blotched with rich purple brown, the latter in addition having a row of large ocellate spots along the upper edge; the pouch is purplish in front, reticulately marked behind. *Vriesia psittacina* *Morreniana*, E. Morren (tt. 10, 11, 12), a very handsome hybrid, the *Vriesia Morreniana* of gardens, and represented by fig. 3 (not fig. 2 as inscribed) of the triple plate above quoted. It is a very fine Bromeliad, with smooth green leaves disposed in a rosette form, and a tall scape bearing a distichous spike of about fourteen subapproximate yellow and green flowers, emerging from scarlet and yellow green-tipped bracts. It is quite intermediate between the two parents, *V. psittacina* and *V. brachystachys*.

The GARTENFLORA (Oct.—Nov.) contains figures of *Statice Suworowi*, Regel [t. 1095, figs. 1, 2], an annual species, with radical oblong-lanceolate leaves ruinate toothed or lobed, and naked scapes supporting a terminal spike of small funnel-shaped blush flowers; found by Mr. A. Regel in West Turkestan. *Papaver pavoninum*, C. A. Meyer [t. 1095, figs. 3, 4], a slender annual Poppy from Turkestan, having bipinnatifid leaves with narrow pointed segments, and moderate-sized scarlet flowers with a black spot at the base of the four petals, after the Rheas type. *Ponthura nudicaulis glabriuscula*, Regel [t. 1096], a West Indian and Tropical American Bromeliad, with blunt-recurved spiny-edged leaves, and a spike of pale greenish-yellow flowers with the broad lance-shaped bracts of a rich coral red. *Citrus japonica*, Thunberg [t. 1097], the Kum-quat. *Thunia Marshalliana*, Rehb. f. [t. 1098], a beautiful terrestrial Orchid from Moulmein, the stems 2 to 3 feet high, clothed with distich-

ous oblong-lanceolate acuminate leaves, whitish beneath and bearing a terminal nodding raceme of handsome white flowers, of which the front lobe of the lip is yellow streaked with red, much dilated and undulated, the five crests and intermediate spaces ornamented with yellow fringes. *Cardamine pratense fl.-pleno* [t. 1099, figs. 1, 2], a semi-double form of the Lady's Smock, very different from the double-flowered variety seen in English gardens, and very much inferior. *Tulipa brachystemon*, Regel [t. 1099, fig. 2—3], a small-flowered Tulip allied to *T. Kolpakowskiana* and *T. Kesselringi*, with linear-oblong leaves, and small dull reddish-purple flowers bordered with yellow, the interior petaline segments yellow; from Turkestan. *Lonicera hispida*, Pallas [t. 1100], a hardy deciduous shrub, with ovate-elliptic leaves, and small drooping funnel-shaped flowers; from Turkestan.

L'ILLUSTRATION HORTICOLE (11—12 liv.) gives us figures of *Vriesia Rodigasiana*, Morren [t. 467], a very handsome Bromeliad from Brazil. It forms a tuft of short recurved blunt-tipped loriform green leaves with open sheathing bases, and produces a tall slender scape terminating in a lax panicle of distichous remote tubulous yellow flowers.—Compagnie Continentale d'Horticulture. *Schismatoglottis Lavellei* *Lansbergeana*, Linden [t. 468], a very handsome Aroid, with foliage of moderate size, the petioles bright red tufted, the laminae oblong-ovate cordate at the base, the upper surface a rich dark green, and the under surface deep crimson; from Java.—Compagnie Continentale d'Horticulture. *Codiaeum (Croton) elegantissimum*, Bull [t. 469], a handsome Croton, with long drooping leaves having the centre yellow and the margins green, the petioles being bright red. *Anthurium Scherzerianum* *Madame Emile Bertrand*, Lind. f. [t. 470], a fine hybrid between *A. Scherzerianum* and *A. Williamsii*, with the ovate spathes white sparingly spotted with red on the inner surface, and much more heavily spotted with red on the outer surface. This is the fourth hybrid of this character, the others being *A. S. Rothschildianum*, *A. S. Devonsayanum*, and *A. S. andegavense*. *Pescatorea Lehmanni*, Rehb. f. [t. 471], a good figure of this fine Orchid. *Pellionia Daveauana*, N. E. Brown [t. 472], a charming little trailing Urticaceous plant, with much the aspect of a Begonia; the stems are slender and rooting, the leaves ovate or ovate-lanceolate obliquely cordate at the base, of a very pale bright green in the central portion, with a broadish margin of olive or bronzy green, the variegation being bright and effective; the inflorescence is eymose, the flowers minute green. It is the Begonia Daveauana of Carrière; native of Cochin China.

The REVUE DE L'HORTICULTURE BELGE ET ETRANGERE (Nov.—Dec.) gives illustrations of *Crassula gracilis*, Eberlé, a new species remarkable for its beauty and its free-flowering habit, its chief flowering season being the months of November, December, and January. It is a dwarf branching succulent, with fleshy pointed lance-shaped leaves, and forms a dense mass closely covered with its heads of lively red flowers, which are as fragrant as heliotropes. According to M. Eberlé the plant is perfectly hardy; last year he had specimens about 10 inches broad and 8 inches high. Pictures of a group of ornamental plants from Ferrières; of the Dropmore Araucaria; and of *Lapageria rosea*, complete the volume.

In the BULLETIN D'ARBORICULTURE, ETC. (Oct.—Nov.), we have coloured figures of the *Cherry Early Rivers*, a good early sort pretty well known in this country; and the *Pear Louise Bonne d'Avanches Panachée*, a variety with prettily striped fruits, very good in quality, and very ornamental for the dessert.

GARDEN GOSSIP.

DURING the season of 1883, the various MEETINGS of which the dates are subjoined, are announced to take place:—

ROYAL HORTICULTURAL SOCIETY, South Kensington:—The Fruit and Floral Committees will meet on the following Tuesdays—January 9, February 13, March 13 and 27, April 10 and 24 (also National Auricula Society's Show), May 8 and 22 (also Summer Show, continued on 23rd), June 12 and 26 (also Pelargonium Society's Show), July 10 and 24 (also National Carnation and Picotee Society's Show on 24th, and National Rose Society's Show on 3rd), August 14 and 28, September 11, October 9, November 13, December 11.—ROYAL BOTANIC SOCIETY, Regent's Park, will hold Spring Exhibitions on Wednesday, March 28, and April 25; Summer Exhibitions on Wednesday, May 16 and June 13; and an Evening Fête on Wednesday, June 27.—ROYAL BOTANICAL AND HORTICULTURAL SOCIETY OF MANCHESTER will hold Spring Exhibitions on March 20 and April 14; National Whitsun Show, May 11—18; Rose Show, July 21; Cottagers' Show, September 8; Chrysanthemum Show, November 20.—NATIONAL ROSE SOCIETY, in addition to the above Show at South Kensington, will hold a Northern Exhibition at Sheffield, July 12.—ROYAL CALEDONIAN HORTICULTURAL SOCIETY announces Shows for April 4 and 5, July 11, and September 12 and 13.—ROYAL HORTICULTURAL SOCIETY OF IRELAND will hold three Shows, on May 17, July 5, and September 6 respectively.—The Quinquennial Exhibition of the SOCIÉTÉ ROYALE DE BOTANIQUE ET D'AGRICULTURE DE GAND, April 15—22. The SOCIÉTÉ IMPÉRIALE D'HORTICULTURE DE RUSSIE proposes to celebrate its 25th anniversary by a great International Exhibition, to be held at St. Petersburg in May next.

— THE following VEITCH MEMORIAL PRIZES have been allotted for competition by the Veitch Memorial Trustees during the present year, namely, three Medals with £5 prizes added, to be competed for by gentlemen's gardeners, for the following subjects:—Best Stove or Greenhouse Plant, in flower; Best Orchid, in flower; and best Dish of Grapes. These are to be selected from subjects staged at the shows of the Royal Horticultural Society (Summer Show), the Royal Horticultural Society of Ireland, and the Grand Yorkshire Gala Floral Fête (June Show), the latter being the 25th anniversary of the establishment of the Show.

— THE juice of *MIMUSOPS BALATA* has been the cause of an extraordinary fatality in British Guiana, as we learn from *The Colonies and India*. An inexperienced traveller having, as is the custom in tropical countries, taken a refreshing draught from the stem of one of the many water-holding plants which thrive in the forests, qualified his cold refreshment by a "nip" of rum. Shortly afterwards he died in excruciating agony, and a *post-mortem* examination showed that his internal organs were literally sealed up with indiarubber. He had imbibed the sap of the *Mimusops*, the juice of which coagulates and hardens in alcohol.

— THE pretty *ERICA SINDRYANA* ought, it appears, to be called *E. propendens tubiflora*. It is a seedling from *propendens* crossed by *Linnæoides*, and was raised by Mr. Turnbull. Before it was named, however, he sent plants to two friends,

which never reached their destination, and when a few years after *E. Sindryana* made its appearance he recognised in it an old friend. A seedling from this has gone back to something like the original *propendens*, except that the tube is rather longer and darker.

— THE rare and interesting *CYSTOPTERIS MONTANA*, one of the rarest and choicest of our native Ferns, grows very freely in the garden of Mr. Atkins, of Painswick, in a pan plunged in coal ashes under a north wall. In this position it has been undisturbed for years, and grows vigorously. Mr. Atkins informs us that he uses only a moderate quantity of earth, to grow it in, but plenty of shattered oolite stone from the neighbouring quarries—full half, and the rest decayed vegetable mould and peat. It does better out doors than in.

— THE charming South African *ASPARAGUS PLUMOSUS* does well in an intermediate house treated as a climber trained to the rafters, for which purpose the plant is in every way adapted. So trained it has a beautiful effect. Independent of its suitability for being so used, and its elegant appearance in any form, it ranks second to nothing yet employed for mixing with cut flowers, not only for its plume-like form and beautiful green colour, but for its enduring properties in water, which are unequalled; even the young pale green leaves when not fully grown, will keep quite fresh for two or three weeks.

— THE new *ANTHURIUM ANDRÉANUM*, now it is thoroughly established, is improving in character in the same way that *A. Scherzerianum* did. Mr. D. Thomson, of Drumlanrig, in an interesting note on this magnificent Aroid states, that during the past summer he had grown spathes measuring 7 inches by 5 inches; and so late as the middle of October there were some measuring 6 inches by 4½ inches, with stems over 3 feet high. "The foliage of the plant producing these flowers is much larger than any other we have met with. We grow this plant in the East Indian Orchid house, and find it does best in a compost of equal parts fibry peat and sphagnum, with a dash of dry horse droppings and horn shavings mixed in; and, like all similar plants here, it is growing in a glazed pot."

— *FN HOUSE'S STIMULATOR* we are told we have a fertiliser which will take the place of Dung for Fruit Trees, Vines, Vegetables, and Flowering Plants. It is said to far exceed any Farm-yard Dung in increasing the production of a crop, and at a much less cost.

— CARTER'S VADE-MECUM for 1883 is, as usual, one of the most complete and tastefully got up of the many catalogues which are annually issued in connection with Gardening. In fact, it is much more than a mere catalogue, and may claim to be a Table-book, so numerous are its attractions and so highly is it embellished inside and out. One of the illustrated pages is particularly interesting, as it represents four different Royal visits to Messrs. Carter's & Co.'s Exhibitions. The coloured plates represent Carter's Emperor strain of Petunias, Select Primulas, Godetias, Mimulus, &c., and "the three best Peas in the World."

— MESSRS. ROUTLEDGE & SONS send us *TOWN GARDENING, A HANDBOOK FOR AMATEURS*,

by R. C. Ravenscroft, which is one of the best books of its class we have met with—clear, concise, and judicious. The author first points out the difficulties of battling with the impure elements—smoke, dust, &c.—of such situations, the possible absence of light, and the usually unwholesome and unworkable soil, and urges the necessity of manuring both for vegetable and flower culture. Both outdoor and indoor gardening receive attention, and not only are useful instructions given for the cultivation of the several objects, but good selections of the different classes of plants are given. Even the Grape Vine is not forgotten, for it is truly said to make “when properly cultivated, the best of all climbers under glass,” and as truly it is added, that “fine fruit can be grown and ripened in any town.” There are sundry orthographical inaccuracies—thus on one page we read of the “Cuba, or variegated Laurel,” opposite a paragraph devoted to the Aucuba, but slips of this sort are rare, and do not mar the general utility of the book, which is worthy of being strongly recommended to town gardeners. All that they want to know at the outset of their career as such, they will find in this well written and neatly printed pocket volume.

— A NEW VINE PEST has made its appearance on the Continent in the shape of a minute fungus, the *Peronospora viticola* of Berkeley, the dangers of which are said to be far more serious even than those of *Phylloxera*. As regards the latter, no less than 34 communes in the district of Chamberry (Savoie) are now infected with it.

— THERE is a rich store of INDIAN PRIMULAS yet to find their way to our gardens. The last number of the *Journal of the Linnean Society* contains a paper referring to many of these undescribed and imperfectly known species, and is illustrated by numerous plates containing figures of some twenty-six species, many of which appear likely to be welcome additions to our existing collections. *P. Gambeliana*, with orbicular-cordate leaves, and large purple flowers; *P. putchra*, with ovate-oblong leaves, and large purple flowers; *P. obtusifolia Griffithii*, with ovate-cordate leaves, and large bright purple flowers; *P. elongata*, with oblanceolate leaves and bright yellow flowers; *P. Kingii*, with elliptic-lanceolate acute leaves, and claret red flowers; *P. Dickieana*, with elliptic obovate leaves and yellow flowers; *P. uniflora*, with very small orbiculate leaves and large pale-lilac flowers; *P. soldanelloides*, a beautiful little plant, with small ovate crenate leaves, and a nodding white flower; *P. Elwesiana*, with oblanceolate leaves, and large funnel-shaped flowers; and *P. Wattii*, with oblong-oblanceolate leaves, and rather large violaceous pendent flowers—all these appear likely to be acquisitions.

In Memoriam.

— HENRY WINTHROP SARGENT, Esq., died recently, in his 72nd year, at his country seat, Wodenethe, on the Hudson River. He settled in the neighbourhood of Newbury, the home of Downing, from whom he received his earliest lessons in landscape gardening, and his first knowledge of trees. Wodenethe under his hand became one of the most beautiful and instructive gardens of the English school; and its master, the most widely known and famous of American gardeners. Mr. Sargent was par-

ticularly interested in the introduction and cultivation of exotic trees, and his experiments and studies in this direction have been of great and lasting value to his country. Wodenethe has been the grave of thousands of trees, but they have not died in vain.

— GEORGE WAILES, Esq., died recently at his residence at Gateshead, in his 80th year. Mr. Wailes was one of a famous band of young naturalists who did good service by establishing museums and developing a taste for natural history among their townsmen. His special peculiarities lay in the direction of entomology, botany, and gardening. In this latter connection his memory will be handed down to posterity in the name *Wailesia* attached by Lindley to a genus of Orchids. Alpine plants and Orchids were his pet subjects.

— MR. PETER MURRAY died recently at Hamilton, Canada, at the age of 76 years. He was a native of Lanarkshire, and the eldest of eight brothers, two of whom have risen to the position of merchants in Canada. He was for about thirty years gardener to the late Marquis of Breadalbane, at Taymouth Castle, Perthshire, and was known to be an excellent practitioner in all departments of gardening.

— MR. THOMAS WHALLEY, seedsman, of St. George's Crescent, Liverpool, died recently at the age of 63. He was much respected throughout the agricultural districts of Lancashire and Cheshire, and with his father had been connected with the trade of Liverpool for nearly a century.

— MR. JOHN SADLER, Curator of the Royal Botanic Gardens, and of the new Arboretum, Edinburgh, died on December 7, in the 46th year of his age. He was born at Gibleston, Fifeshire, on February 3, 1837. In 1854 he became assistant to Dr. Balfour, Professor of Botany in the University of Edinburgh, and carried out the duties of his office with diligence and assiduity. In 1858 he became Secretary to the Edinburgh Botanical Society, and for seventeen years he filled a corresponding position in connection with the Scottish Arboricultural Society. In 1867 he was appointed Lecturer on Botany in the Edinburgh High School, and two years later he was awarded the Neill Prize of £50 by the Royal Caledonian Horticultural Society, in acknowledgment of the services rendered by him to botany and horticulture. In the same year, 1879, on the death of Mr. McNab, he was appointed as his successor at the Botanic Gardens, and last year had his duties increased by his appointment to the post of Curator of the new Arboretum. He was buried in the Wariston Cemetery, in the presence of over a hundred of his relatives and friends, including most of the leading horticulturists of Edinburgh and the neighbourhood.

— MR. WILLIAM HINDS died on December 20, at the age of 38 years. He was for several years gardener to Sir T. E. Moss, Bart., at Roby Hall, and at Otterspool; and subsequently took charge of the gardens at Canford Manor, Dorset. He had been for some years a frequent contributor to the *Gardeners' Chronicle*, and for some few months had been attached to the staff as travelling reporter.





J.E. MacFarlane del.

Carnations.

Thymus arvensis L.

1 Crimson Souvenir de la Malmaison. 2 Red Souvenir de la Malmaison

CRIMSON SOUVENIR DE LA MALMAISON CARNATION.

[PLATE 579.]

THE old blush-coloured form of this fine tree Carnation, so extensively used for greenhouse decoration, is known to every one interested in the culture of flowers; its free-growing character, the abundance of its fragrant blossoms, and their extraordinary size, are the features by which it has won its way to fame.

The new varieties which we now figure—for there are two of them—possess all these good qualities, and add thereto the advantage of possessing more striking and brilliant colours. They were brought under our notice by Messrs. Kelway & Son, of Langport, the champion British gladiolists, and the samples forwarded by them have been very truthfully rendered by Mr. Macfarlane in the accompanying plate. Fig. 1 is the CRIMSON SOUVENIR DE LA MALMAISON, the flowers of which are of very large size, regularly and closely filled with fringed petals, the colour being a deep crimson-red. Fig. 2 is the RED SOUVENIR DE LA MALMAISON, and is, perhaps, a still finer flower than the other, being very large and full, and of a salmony tinge of light red. Both, it will at once be seen, are quite distinct in colour from the old familiar variety, from which, in the

absence of direct information, possessing as they do a similar habit, we conclude they are accidental sports which have subsequently been propagated and fixed.

We are informed by Messrs. Kelway that the shoots of these two varieties—the grass—is not so coarse as in the old flesh-coloured sort, but that the plants are much more free in growth, and very free in flowering. They make fine plants for conservatory decoration, forming large bushes, bearing a dozen flowering branches, each producing from eight to ten buds or flowers. The flowers represented were from plants grown under glass, and indeed all the forms of Malmaison are more suitable for indoor than for outdoor culture, and as they bloom abundantly, and are very sweet-scented, they provide just what is required in a decorative plant, and no doubt the newer sorts will be as popular or more so than the old one.

They thrive well if potted in good ordinary loam, and may, if desired, be trained up in a tree-like form, since the wood becomes hard and firm. At Langport they have, we are told, been grown in this way from five to six feet in height.—T. MOORE.

DOUBLE-FLOWERED IVY-LEAVED PELARGONIUMS.

THESE, when well managed, and furnished with at least two years' growth, are very useful during the winter season where there are heavy demands for cut flowers. To obtain a supply, let us begin with the young plants. Nice healthy plants should be selected in spring, and should get a liberal shift, say into eleven-inch pots; a trellis should be put to each pot, and the plants placed in a close—not hot—house for a few days; when they have started to grow, if it is not mild enough to stand them out of doors, they must be moved to any cool place which is secure against frost, and here they can stand until put out. During the summer they should be plunged in the full sun, and will require little further attention through the season but watering and tying, which should be done regularly as the young shoots grow. In all probability they will make vigorous growths,

but these should be pinched back until the middle of August, when pinching should be discontinued. As soon as there is any danger from frost, they must be removed to a cool house where they can get all the sun possible, as they will have made strong growths, and require a good deal of ripening.

If all has gone well, by the beginning of winter blossoms should be appearing at all the points of the shoots. If the flowers are not particularly wanted the plants may remain in this cool temperature; they will not open so quickly in it, but they will be of a richer colour, and will last longer than if produced in a higher temperature. If these plants are kept through the winter, and are given a rich top-dressing, and plunged out of doors for the summer season, giving liberal doses of manure water, there will not be the growth there was the previous year, but instead there will be

short growths all over the plant, which at the blooming stage will amply repay all labour bestowed on them.

We find that the older the plants, if in good health, and confined at the roots, the better they bloom, but it is always necessary to feed them well. If planted out, with plenty of room to run, in a short time they would, like Tea Roses treated in the same way, be always in bloom. We are now cutting (January), or could cut if required, Tea Rose buds, every day, from plants trained at the back of the Vineries.

If the blooms are wanted at any given time, they should not be put into too strong heat, as this makes them start into growth too quickly, and spoils the flowers.—A. HENDERSON, *Thoresby*.

ON LIFTING CAMELLIAS.

CAMELLIAS grown in pots require shifting in spring before growth begins, or after the buds are set, a good crop of flowers being the end in view, and each one adopting the plan that suits him best. A good return can be had from either plan of working. But it is to the lifting of Camellias that I wish to draw the attention of those who are interested in the subject. The planting them out is a common practice; the lifting of them not so common. In one case within my experience the plants were growing in a well-prepared border of loam, freely mixed with bones, along the back of a lean-to late vinery. They had reached such dimensions that their removal was quite necessary; they were so close that on entering they presented to view a hedge-like appearance. It was to prevent the plants from becoming spoiled that their removal was decided upon. Their average height was nine feet, and their breadth as far as an ordinary man could extend his arms. Individually they might have been termed perfect specimens, and had they been allowed to remain they would have formed a perfect hedge in reality. But there was a circumstance which would have prevented them from continuing as a good hedge for long, and that was, the border was only four feet wide and half that depth, conditions which would very soon have produced a stunted appearance.

A supply of soil being got ready, and freely

mixed with bones, similar to that in which the plants were growing, the boxes to contain the roots were carefully drained, and the front bricks being knocked down and wheeled outside, a man was placed on each side of the plant to work the soil away carefully, while the foreman held it by the stem and eased it out as it became looser in the bed. It was finally got out, with as much soil as possible, and lifted into the box, the fresh soil being worked amongst and around the roots carefully, and the whole finished off with a good lifting rap on the floor to settle down the soil.

The operation lasted three days, ten plants being lifted each day, besides other work. It may be said of these Camellias that to this day not a leaf or bud has dropped. The plants are flowering freely, and are evidently quite at home in their new quarters, where they have now been for about six months.—NORTHERN.

THE AMERICAN VINE MILDEW.

WE are not aware that this form of Vine Mildew has yet made its appearance in this country, but as it has been imported from North America where it is very destructive, and is spreading rapidly through the European vineyards—whence doubtless we received the Phylloxera—we cannot be too careful in watching for the first symptoms of its appearance, so as to be able to take immediate steps to resist its attacks, and if possible to prevent it from becoming established amongst us.

In a recent number of the *Garten-Zeitung* (1883, pp. 11—18, with figs.), Professor Magnus, of Berlin, has given an account of the introduction and spread of the disease in Europe, and shows that it is due to the attacks of a microscopic fungus, the *Peronospora viticola* of Berkeley. Of this paper the following is an abstract.

The presence of the *Peronospora* in the European vineyards, seems to have been first observed in France in 1877, on the numerous vines which, in consequence of their supposed phylloxera-resisting virtues, had been imported from America; in 1879 it was discovered in Upper Italy; in 1880 in Switzerland and Hungary, in Carniola and the South Tyrol, and in Lower Austria, causing much damage

wherever it appeared. In 1882 it had invaded the German empire, at Alsace and in Bavaria. By reason of its rapid dispersion the danger has therefore come very near to our shores.

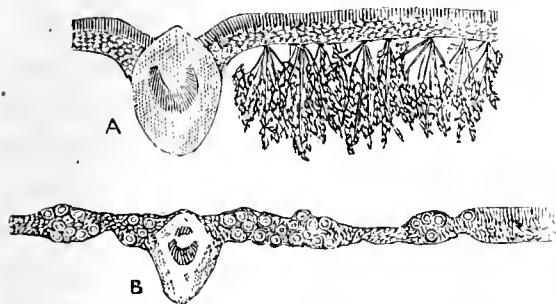


FIG. 1. PERONOSPORA VITICOLA ON VINE LEAF.

We owe to the researches of many botanists, amongst others to those of De Bary and Millardet, our knowledge of the life history of this destructive cryptogam. In its attacks on the vine it appears chiefly on the leaves, but only on the under, never on the upper surface; more rarely it attacks the young stems and the incipient bunches. On the leaves it originates mostly on the projecting nerves, and spreads from them over the whole surface, as represented in fig. 1, which shows at A a cross

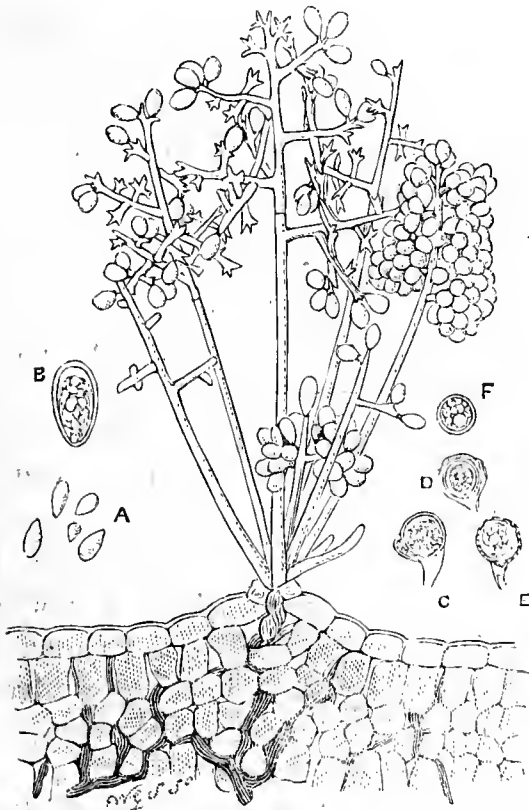


FIG. 2. PERONOSPORA VITICOLA, MAGNIFIED.

section of the leaf, with the thick growth of the conidia-bearing branches of the fungus forming a kind of down on the under surface, and at B a similar section showing the leaf and the nerve both dried up through the effects of

the fungus growth. Fig. 2 shows a portion of the *Peronospora*, more highly magnified, A representing a conidium fallen off, B one more highly magnified, C, D, oosporangia with attached antheridia, E a ripe oosporangium, and F an oospore therefrom—all after Millardet.

The American Mildew differs from the ordinary Vine Mildew, which is white, in being of a grey colour with a dingy green tinge, and of a downy character, the tree-like ramified

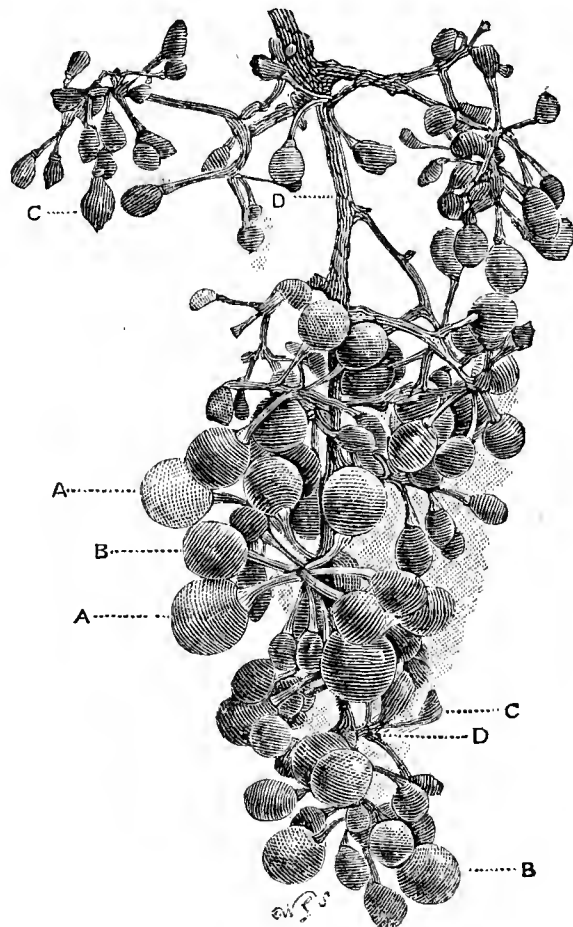


FIG. 3. GRAPES AFFECTED BY PERONOSPORA.

threads emerging from the stomates, and terminating in a unicellular conidia, of which a very large number are developed; they are pear-shaped attached by the narrow end, and when ripe fall off, when, if they come within a short time in contact with a drop of water they split up and each portion becomes converted into a ciliated antheridium or swarm spore, which within some four or five hours reaches its resting or mature stage, and then immediately germinates, and penetrates the tissue of the vine leaf, growing up between the cells, and forming fresh fungus threads which send into the cells minute suctorial processes. From these fungus threads proceed the conidium-bearing branches, which emerge through the stomates of the under side of the leaf, and

form the whitish-grey downy coating indicative of the disease. Thus through the aid of these conidia the malady spreads quickly in wet or damp but not cold weather, as well as when there is abundance of dew, while in dry weather it is longer confined to the attacked plants, or to their immediate vicinity. It thus becomes particularly destructive in vineyards occupying damp situations, and is less hurtful when the situation or the season are dry.

Millardet has recently observed the *Peronospora* not only on the vine leaves, but also on the inflorescence and on the fruit bunches, sometimes attacking the ramifications, and sometimes the berries. The attacked berries become first of all doughy, then rotten, and finally dried up, as shown in fig. 3, where A represents the sound berries, B berries after being some few days attacked, C berries after being several weeks attacked, and completely dried, and D the stalks attacked and dried up.

Besides the germinating conidia, globular spores called oospores, are also formed by the fungus threads within the leaf tissue; they are found on the globularly swollen end-cell of a fungus thread, the oosporangium, on which the minute end-cell of another fungus thread, the antheridium, fastens itself. After this globular cell shrinks up, its contents surround themselves with a membrane, and thus become converted into an oospore, which is a lasting spore, and in opposition to the conidia does not germinate till after a long rest. It is in this state that the fungus passes the winter from year to year in the fallen leaves. This Millardet has proved by placing dry vine leaves containing oospores of the *Peronospora viticola*, in pots in which grape stones were sown, when he found that a great portion of the seedlings became infected by the fungus. If, therefore, the affected vine leaves which fall in autumn are burnt, the cultivator may at least often secure the respite of a less severe attack, and also the later appearance of the disease.

This, however, after all, is only a palliation of the evil. Many remedies applied to other vine diseases have been tried in vain against the American Mildew, as for instance the sulphuration or washing of the stems with a solution of 1 kilog. sulphate of iron in 2 litres of water, applied successfully against the "black burner" (anthracnose). But the ap-

plication of a powder consisting of 4 kilog. of pulverised sulphate of iron (green vitriol) mixed with 20 kilog. of pulverised sulphate of lime, was very successful. In a plantation sprinkled with this mixture on the 2nd of July, the young shoots did not suffer, but the spots of disease blackened and the leaves became intensely green. The success of this experiment was the more remarkable as the vines were between two sets of diseased vines which had not been similarly treated. Another plantation vigorously attacked by the mildew, was, on the 24th of September, sprinkled in a similar manner, and also cured, but in this the young shoots and tender leaves were blackened, possibly by reason of the abundant rain which would quickly dissolve the vitriol, while at the July application the weather was hot and dry, and the vitriol would be dissolved more slowly. Hence it would appear that in order not to injure the young leaves and inflorescence it is necessary to take care to apply the remedy in dry weather.—M.

HOW TO GROW ACHIMENES.

THE genus Achimenes consists of stove-flowering plants of great beauty, which well repay cultivation. They are tuberous-rooted plants, dying down annually, and requiring a season of rest after the foliage has decayed. Unfortunately, they are apt to be overlooked at this stage, and when this happens the scaly tubes become shrivelled, and lose much of their strength. An eminent cultivator recommends that as the plants advance towards maturity, and begin to show signs of decay, water should be withheld gradually, so that the tubercles do not get starved before the leaves have failed; and as soon as the tops are quite dead the pots containing the roots should be removed and stored upon their sides, in a warm situation where no moisture can reach them, until wanted in the following spring.

A light, rich, sandy, porous soil best suits the Achimenes. That recommended by Mr. B. S. Williams, in his *Stove Flowering Plants*, is composed of "peat and leaf-mould in equal parts, along with a sixth part of sheep manure well decomposed, and enough silver sand to give the whole a white appearance." This

will be found to suit them. The cultivator should start several batches of tubers into growth at stated times, so as to secure a succession of bloom. This can be done by making use of a box or cutting pan, and filling it about three parts full of a suitable compost; in this lay the roots, about April, for blooming in July, August, and September. Until the shoots appear above the surface, the soil in which the tubercles are buried should be kept moderately dry, and when the shoots are an inch or two in length, they should be transplanted into the pots or pans or baskets into which they are to flower, enough to afford a good head of bloom being placed in each. The pots should be well drained, and a rich soil like that stated above is necessary, in order to meet the great demands on the soil while the plants are in bloom. Once placed in the blooming pits, they should not again be shifted.

Great care in watering is requisite when the plants are in the infancy of their growth; if the morning's sunshine falls on a leaf in a moist state, either caused by an accumulation of vapours, or the careless use of the watering pot, in a short time it will become brown and crumpled, and be materially injured, if not destroyed. A high temperature, plenty of moisture, and a shaded position, should be afforded the plants while making their growth, and with such surroundings they should remain till they are in bloom, when they can be removed to a greenhouse or cool conservatory. When the plants are forming buds, a gentle syringing during the afternoon, with copious waterings of weak liquid manure will prolong the period of bloom.

Some growers pinch the centres out of the leading shoots, to induce them to make lateral growth, and produce a compact branching habit. This method should not be applied to plants intended for the earlier bloom, but may be adopted in the case of later examples, as it will tend to postpone the time of blooming. Stakes should be placed against the leading shoots, in order to preserve an upright symmetrical growth; these should be placed in the flowering pans or pots when the shoots are three or four inches long, and the latter should be tied to them as they make growth.

The following would form a select and unique collection:—

Ambroise Verschaffelt : white, with dark pencilled centre.

Carl Wolfarth : purplish-crimson, large flower.

Dazzle : vivid scarlet, dwarf habit.

Dr. Hopf : white, with pink eye.

Grandiflora : rosy purple, large and fine.

Longiflora major : mauve blue, very fine.

Purpurea Elegans : purple, light orange throat.

Rosea Magnifica : bright rose, spotted in the centre.

Sir Treherne Thomas : rich crimson.

Stella : magenta, orange eye, spotted carmine.

Violaacea : blue, dwarf habit.

Williamsii : vivid scarlet, orange-yellow throat.

—R. DEAN, *Ealing*.

COARSE GRAPES.

WE observe that some persons class such Grapes as Gros Colman and Barbarossa [Gros Guillaume] among the “coarse kinds,” but when these two excellent Grapes are properly treated they cannot be called coarse, or be classed among second-rate kinds. We know, indeed, that often, when they are exhibited, they are quite unfit to be eaten; and only when they happen to be grown under Muscat treatment are they fit to eat before Christmas or later. Though Lady Downe's Seedling is justly lauded as a first-rate Grape late in the season, it is only in exceptional cases that we have tasted it in its true character. In the case of many Grapes (especially among the black kinds) fire heat is withheld at the time when it should be applied vigorously, with air on at top and bottom of the structure night and day for weeks. This brings up a rich sugary flavour, as well as prepares the fruit for keeping far into the season—May or June if desirable—and retaining its excellence to the last.

Vines are too often started six weeks later than they should be; consequently only a very short period is allowed them to mature their fruit, or they have to ripen so late in the season that to do them justice is impossible. We prefer beginning early, even with the latest of the houses, giving them a long season, and never thinking of withdrawing fire heat for weeks after the fruit is thoroughly coloured. With such treatment Gros Colman, Barbarossa, and even Raisin de Calabre are immensely different to the massive samples of them which are often exhibited and gain prizes; and which after the shows may be used as ornaments, but cannot be eaten by those

whose palates are accustomed to good Black Hamburgh, Muscat, Duke of Buccleuch, and other sorts valued for their excellence of quality.

It is unfortunate that exhibitions of fruits are not held about the New Year and later, when an opportunity might be afforded of testing the qualities of many of the later kinds of Grapes. If prizes were offered for high flavour in various sorts, this would determine the value of many kinds which are seldom seen on exhibition tables; and would also illustrate the fact that while in the hands of some cultivators the fruit may be of superior quality, there are others not capable of growing the same kinds fit to be eaten. A late exhibition would bring to light apples and pears, meritorious both as to appearance and quality such as are never seen at earlier fruit shows.
—M. TEMPLE.

WATERING ORCHIDS.

NO doubt Orchids, like other plants, are particular as to what is given them to nourish their roots. We have often heard growers remark that the water obtainable in the particular locality where they reside, is hard, and that their plants do not thrive as they should do. We can fully endorse this statement, as we know that hard water is bad for Orchids as well as for other plants; hardwooded plants especially, will not thrive where the water they receive does not suit them, but these plants have fine roots, and are sooner killed than Orchids, which have thick fleshy roots. An Orchid grower from the North of England recently informed us that his plants were not doing well, and that he could not keep the sphagnum moss alive; he attributed this to the use of hard water, and consequently put up a cistern for rain-water, and employed it. The result has been that the plants have improved in health, and the moss is growing luxuriantly.

There is a great difference between different hard waters; some contain a quantity of iron, and others are chalky, and when used for syringing leave white marks upon the foliage. We believe water containing chalk and lime to be beneficial to some kinds of Orchids, especially *Cypripediums*; in fact, some growers use chalk or broken limestone mixed

with charcoal and peat to grow them in, and very well they succeed in it. We have frequently seen distinct traces of lime on imported *Cypripediums*. An importation of *Cypripedium Spicerianum*, received some time ago, was literally covered with lime deposit, probably owing to the plants having been found growing in the fissures of limestone rocks, where the water trickled down upon them. We should think that water containing iron would be the most injurious to Orchids.

We have found rain-water to be the best for Orchids and for all kinds of plants, this being the water supplied by nature in their various habitats. Rain-water is easily to be obtained, by providing tanks under the stages, and allowing the rain-water from the roof to run into them. In this way no space is lost. A pump should be attached to the tank for convenience of lifting in case the water should get low.

The plan we adopt is to have a deep cemented tank in the centre of the house, under the stage, so that the top may be left open; this allows the water which is standing in the tank to become somewhat warmed by contact with the atmosphere of the house, which is very beneficial. Orchids should never be watered with water that has not had the chill taken off, as cold water, especially in winter time, causes spot, and may rot the growths and injure the roots. Into this tank the rain-water runs from the roof, and as we have the New River water laid on as well, when rain-water is scarce we fill up with this, and thereby have a mixture of rain and hard water.—B. S. WILLIAMS, in *Orchid Album*.

VINES AND VINE CULTURE.

CHAP. XXII.—PLANTING.

VINES may be planted at any season of the year, provided all the requisite conditions are fulfilled. The usual practice is to plant the ripened canes of the previous season's growth. In the majority of cases these have to be received from the Nursery at the end of the season, and the earlier they are obtained and planted the better. October is a very good period for planting. Vines planted then commence a little root-action, and get, to some extent, established before the spring.

It is not advisable to plant in the midwinter months, especially in outside borders, as the soil is then very cold and wet. If Vines cannot be planted before November it is far better to defer the operation until spring, say at the end of January or beginning of February; later in the season they will be commencing to grow and cannot then, with safety, be pruned or cut as may be required.

In planting young Vines from pots the soil should be shaken away, and the roots spread out fully, and laid as near the surface as may be possible; the soil should then be filled in, made firm, and watered, if necessary, in the usual way.

Another method which is greatly to be commended, is to plant the young growing Vines that have been raised from eyes during the same season. For those who have the convenience to raise their own Vines, and to plant them out in the month of May or during any of the summer months, there is a gain of at least one year's growth. This, of course, can only be practised where the Vines are planted in the inside borders. The difficulty of carriage, and the consequent damage to the tender growing plants prevents the Nurserymen from supplying Vines for planting in this condition to any extent; otherwise it would be largely adopted. We have planted Vines in May from a six-inch pot, that have made rods thirty feet in length the same season, and formed stems of corresponding thickness. We have also planted out in June and July with nearly equal success. In planting these growing Vines from pots the ball need not be broken, as the roots have not yet become matted, and consequently, if the soil is pressed gently around them, and well watered, there is no check, and the plant commences to grow away immediately.

Mr. Thomson, when at Dalkeith, adopted the plan of raising the Vines from eyes struck in square pieces of turf instead of pots; in these the Vines rooted, and were planted out into the border without disturbance. A very simple and efficient method.

The distance at which to plant depends, to a great extent, on the style or mode of training to be adopted. If we here consider the rods or stems as separate plants we must then allow space between the stems or plants for

the proper development or extension of the side or bearing shoots, and as these extend from two to two feet six inches on either side, it follows that a space of from four to five feet is required. For permanent Vines the distance of five feet is not at all too much, although frequently they are planted much closer. Growers for market plant frequently at from two to two feet six inches apart, but such Vines are only of a temporary character. Other cultivators plant what are termed the permanent Vines at five feet apart, and introduce supernumerary plants between them to produce a crop while the permanent Vines are growing up, when they are cut out, and their space occupied by the latter.—A. F. BARBON.

EARLY PURPLE ARGENTEUIL ASPARAGUS.

NOTWITHSTANDING the generally received opinion that there is only one variety of Asparagus, long observation has convinced me that not only is there a material dissimilarity in size, shape, and colour of asparagus, but also in precocity of maturity as well as in the precocity of annual growth, and that in these features the Early Purple Argenteuil is an especially marked variety. I have grown Connover's Colossal and The Giant, but when these arrived at full maturity I could not distinguish much difference in them from the old and usual type. The Early Argenteuil is of large size and of good shape, without the protuberant head and narrow neck sometimes seen in asparagus. The points of the young shoots are also of a distinct pinkish purple colour. I have planted this variety singly, the plants from 4 to 5 feet apart each way; and also in beds, the rows 18 inches and 2 feet apart, and 18 inches from plant to plant; but I prefer plenty of room, which is one of the French secrets of success, and the single plant mode I find not only the most productive, but the most profitable. Some very fine heads were cut in 1882, from the beds made in 1879, but from the single plants put out the same year the asparagus has been much superior, some of the young shoots reaching $3\frac{1}{4}$ inches in circumference and of corresponding length, the length, however, depending upon the depth of the covering or

blanching material (decayed dung mixed with light soil and free from stones), which I have drawn up to the plants just previous to their showing above ground, and again in about ten days, from 3 to 4 inches being added on each occasion. All my plants were one year old from seed at the time of planting.

There is a tendency in the Early Argenteuil variety to produce a second or autumn growth. Thus in 1881, not only would it have been possible to have had asparagus in September, before the summer growth was cut away and the beds received their winter dressing, but again on the 21st of December I cut some good heads, attributable, doubtless, partly to the season; but I have noticed the second growth in a less degree in previous years. In 1882 asparagus showed at the Experimental Garden as early as the 15th of March, and on the 6th of April cutting commenced in earnest, and continued only to the end of May. As many as seven or eight large heads at a time have been taken from plants put out singly.

A winter dressing of decayed dung is annually applied, and last year early in spring a moderate application of salt and nitrate of soda was given, tried on different plants; but as the latter is considerably more expensive, I shall in future use salt, there being apparently no corresponding advantage in the use of the nitrate. The soil, which is a sandy loam resting on a subsoil of sand or gravel, received at planting time no other treatment beyond being well and deeply manured as for any ordinary crop; but, of course, this treatment would not apply to ground of a heavy character or with a wet subsoil. After cutting ceases the plants are well secured to stout stakes, as the growth made is very strong and rapid, mostly from 6 feet to 8 feet in height, and unless prompt attention be given to the support of the plants they will be materially injured by the winds.

The ground between the plants on the single system may be utilised for early cauliflowers or some other crop for the first two years. In France these hillocks of asparagus are grown amongst vines and haricot beans, but then greater space still is allowed between the plants. After the second year the shade from the asparagus, when it makes its full summer growth, is too great for most crops, but I

think seed onions might be profitably grown the third season, as they would not interfere largely with the root growth of the asparagus, which eventually will take full possession of the intervening spaces to a great depth.

The flavour and quality of the Early Argenteuil variety is all that can be desired, but I have an impression that the flavour of asparagus generally depends more upon its growth and after treatment than upon the variety; flavour must, however, always be a matter of opinion, and so must the question of green or white asparagus. Personally, I much prefer the well-blanchd deeply-cut growth, of which, if made rapidly in warm weather, every particle will not only be eatable, but much superior to the ordinary green asparagus usually seen in local markets. The plants, too, are not drawn upon so much as when a considerable underground growth is allowed to be wasted, and from observation I feel sure that if the heads be allowed to get much above ground before being gathered the productive powers of the plant for the season will be materially lessened. The blanchd growth of asparagus requires considerably more cooking than the time usually accorded to this vegetable, and for want of this much of the white growth otherwise highly flavoured, is wasted.—THOMAS LAXTON, in *Journal of Horticulture*.

BRUSSELS SPROUTS.

THE following hints relating to this useful and popular esculent, from the *Gardener* (1882, 111), are here reproduced, as being at this season very opportune.

“To be certain of success the seed must be sown early, and the plants well established as early in the season as possible. We sow seed thinly on a slight hotbed at the end of February or early in March, taking care to keep the seedlings as sturdy as possible. When well hardened off by exposure to all but very severe frosts, the plants are freely thinned out, the thinnings being pricked out about 4 inches apart in light soil, in a somewhat sheltered position, say near a south-west wall. Those left on the seed-bed were planted last season during the first week in May, those pricked out being transplanted, with good balls of soil attached, about three weeks later.





"The first planted yielded abundantly from the end of August onwards, and at the present time (February 8) have still a quantity of good sprouts forming under the tops; while the lower portions of the stems are clothed with a second crop of close sprouts, which, if small, will eventually prove valuable. The last planted, and which represented the main crop, were on the whole the most profitable; these averaged about 30 inches in height, and have been covered with fine sprouts.

"We made a sowing of seed on a sheltered border early in March; but the plants resulting being inferior to those pricked out from the early sowing, were not employed, and for the future we shall not trouble with a late batch. The sprouts and also savoys being very abundant, we find it unnecessary to cut the tops; and by sacrificing, or rather retaining these, we ensure the growth of a quantity of late young sprouts of the best quality, and probably, to a certain extent, also retard the running to seed of those lower down the stems."

—W. IGGULDEN.

NEW LATE PLUM MONARCH.

[PLATE 580.]

WE owe to the Messrs. Rivers & Son, of Sawbridgeworth, the opportunity of figuring this valuable New Late Plum, fruits of which were received from them about the end of September last in the excellent condition represented in the accompanying plate. It is a seedling which the Messrs. Rivers have named the Monarch, "to complete the trilogy," of which the other members are the Czar and the Sultan. "I think," Mr. T. F. Rivers observes, "that the Monarch will prove to be one of the most important market plums of this generation. The tree is robust, and the fruit, which is produced in clusters, is of the size I send, and does not crack with rain."

The specimens from which our figure and description were made, were received on September 28th last, when the following notes were made:—*Leaves* very broad, showing the vigorous character of the tree. *Fruit* dark dull puce-purple, deeper purple where most exposed, covered with a thin bloom, nearly spherical, with a deep suture, rather large, the specimen being about six inches in cir-

cumference; *flesh* pale greenish-yellow, parting freely from the stone, juicy, and with a pleasant flavour resembling that of a well-ripened Orleans; *stone* $1\frac{1}{4}$ inch long, tapered to both ends, the widest part towards the basal extremity.

Messrs. Rivers may well be congratulated for their renewed success in obtaining a plum which promises to be of so useful a character, in addition to the other important acquisitions which have come from the same quarter. New peaches and nectarines are perhaps to be classed amongst luxuries, but new plums, if good, like good apples, have a bearing on the supply of food for the people.—T. MOORE.

PORTULACAS.

THERE are in many gardens certain dry spots where it is somewhat difficult to get plants to grow with anything like success, on account of their being so hot and arid. It is beyond doubt that many things will not succeed in such a position. Happily for gardeners there are many compensating influences at work in Nature, and she has ordained that such unpromising spots should be just suited for gorgeous, attractive, and free-blooming plants like the species and varieties of *Portulaca* and *Mesembryanthemum*, *Calandrinia umbellata*, &c. There are many gardeners who know nothing of the wealth of beauty and gorgeous coloration to be found in the varieties of *Portulaca*, or the comparative ease with which they may be cultivated. When once grown successfully, the *Portulaca* is scarcely likely to be abandoned again.

I presume that the fine *Portulacas* now cultivated are varieties of *P. grandiflora*, which was introduced from Chili many years ago. Certain garden varieties have been raised and named, and in addition quite a large section of double forms also have been produced. Some continental growers claim to have eight or ten varieties of each; and I have seen as many. They are all remarkable for brilliancy and richness of colour, and they require so little water, that they flourish well on hot and arid spots.

Formerly it was the custom with gardeners to treat the *Portulaca* as a half hardy annual, sowing the seed under glass, and transplanting to the open ground. When treated in this

way the plants never do so well as when the seeds are sown in early spring, where the plants are to flower. The hardihood of the *Portulaca* can be vouched for from the fact that seeds will drop from the plants on to the soil, remain there all the winter, and grow up in spring, making fine plants. The seed is very fine and requires to be sown thinly; and as soon as the plants are large enough they should be thinned out to six or eight inches apart, and then left to flower. When the weather is at all fine, the blossoms will expand and present to the eye a sheet of gorgeous colours; but they close early in the evening and also in dull weather. The two newest varieties are *Aurea striata*, gold and rose striped, and *Blensoni*, red vermilion; these are both single, but for effect I think the single are to be preferred to the double varieties.—R. DEAN, *Ealing*.

THE TURK GRAPE.

THE Henab Turki Grape, of which an account was given by M. Pulliat, in the *Revue Horticole* (1882, 360), was received by him a few years since amongst other Egyptian vines from M. Rousseau, gardener to M. Cacilani, of Cairo. They were planted against an east wall, and grew well for a year or two, but in 1877 and 1878 they were overwhelmingly attacked by mildew and anthracnose, notwithstanding recourse was had to the ordinary remedy of applying sulphur. In 1879, M. Pulliat directed his vine dresser to scatter the sulphur more abundantly, allowing it to fall on the soil and against the walls. This sulphuring continued each year, and at two or three different periods, according as the weather has been more or less dry or moist, caused in 1879 a very sensible improvement; in 1880, the havoc of the *Oidium* was insignificant, and neither anthracnose nor mildew were observed; and in 1881, a good crop of sound grapes was secured on soil little favourable to vine culture. M. Pulliat's experience during these three years leads him to believe that by a preventive course of high-dose sulphuring the maladies already mentioned may be prevented.

As to the Henab Turki Grape, it is said to be a free-growing sort, but, like other varieties

from hot countries, very subject to attacks of mildew, &c. The fruit is described to be of second-rate quality, but its beautiful clusters are a great embellishment to the dessert. The trunk is vigorous, and the shoots semi-erect, with long internodes. The leaves are middle-sized or large, smooth beneath, the lobes rather deep, and the tooting broad, unequal, obtuse, shortly mucronate. The bunches are very large, loose shouldered, on long moderately strong peduncles; the berries very large, ellipsoid, or shortly olivoid, scarcely depressed at the apex, and at the top slightly incurved like those of the Cornichon; the stalks long, slender, slightly verrucose; the flesh firm, crackling, juicy, with an agreeable sweet flavour, and the skin thickish, turning from greenish white to very bright rose, then to deep rose. The fruit is somewhat late in ripening.—M.

THE CALVILLE BLANCHE APPLE AS A WALL CORDON.

THOSE who may have seen this splendid Apple in Covent Garden, or in the markets of Paris, as grown in Guernsey or France, are likely to be somewhat disappointed if they have tried it either as a bush or a pyramid in the open air in this country. Its proper place is obviously a southern or western aspect, either as a cordon, or in any other form on a wall. It does pretty well in East Anglia as a growing cordon at the foot of a south wall. It is also one of the best and most sure cropping Apples either in a pot or tub in a cool orchard or other glass-house—a place which it well deserves.

Even on a wall in this country it seems seldom to reach the size that it attains to in France or the Channel Islands; but it grows to a good size in favourable seasons, and the quality cannot be excelled either for sauces or tarts. It also comes in just as the majority of Apples are going out of season, and fills up what is often rather a scarce time for the best Apples—the long interval from November to April.

The time of ripening varies considerably according to the seasons; and the quality is never fully developed till the fruit assumes a pale yellow hue. It may also be said that the

longer the Calville Blanche is kept, the fuller and richer is its flavour. So much is this the case that as the new year advances this fine Apple is worthy to rank with most of our finer dessert Apples, and is highly appreciated by not a few who seldom eat any other Apple. Its flesh becomes mellow and rich, while retaining its crispness and briskness, and it has a peculiar aroma and fulness of flavour which are much relished by many.

Though rather deeply ribbed, and finishing with considerable roughness around the eye, which is deeply depressed, yet the Calville Blanche, during its later stages, makes a handsome dish, while its luscious perfume, as well as full and satisfying flavour, make it a welcome addition to the dessert through the earlier months of the year. Its size and appearance contrast well with Grapes, Pears, and other Apples, while its flesh and flavour may be described as unique.

Those who would like to equal or rival Continental specimens in size must choose the warmest spots for its growth, thin the fruits rather severely, feed them liberally, or grow them under glass. Medium-sized fruits, however, equal in quality the largest, while the quality of all is very inferior indeed until the fruits are in season, the proof of which is the change of colour to a pale orange.—D. T. FISH.

REGISTER OF NOVELTIES.

NEW PLANTS.

AGAVE VICTORIÆ REGINÆ, Moore (*Gard. Chron.*, N. S., xviii., 841, figs. 148, 149).—This beautiful small-growing Agave forms a compact cone of over 200 conniving leaves, which are margined with white. The flower-stem is about 10 feet high, and 2 inches thick at the base, the dense flower-spike occupying the upper 6 feet, the lower part covered with numerous linear-subulate bracts, the lower ones 4—5 inches long. The flowers are densely crowded, constantly arranged in threes, and of a pale greenish-yellow, $1\frac{1}{4}$ inch long, with the stamens projecting about an inch and a half; Monterey, Mexico.—Botanic Garden, Cambridge, U. S.

CARAGUATA CARDINALIS, André (*Rev. Hort.*, 1883, 12, with col. plate).—A gorgeous Bromeliaceous plant introduced from the Western Andes of New Grenada and Ecuador. The plant is robust, with lingulate recurved bright green leaves a foot and a half long, dilated at the base, and a flower-stem 12—20 inches high, terminating in a vase-shaped head, more than eight inches in diameter, of brilliant crimson bracts, of which the smaller inner ones are some tipped with yellow and some with white; the flowers have not been observed. It is one of the most brilliant plants of the order, and one of manageable size, the bracts retaining their bright colour for a very long period.—M. A. de la Devansaye.

CYRTOSPERMA JOHNSTONI, N. E. Brown (*Gard. Chron.*, N. S., xviii., 808).—A handsome and distinct Arad, with the semi-erect arrow-shaped leaves veined with red, and supported by dark mottled petioles which are armed by irregular whorls of stiff spines and marked with flesh-coloured bands above the spines; the peduncles are terete like the petioles, and similarly armed and coloured; they support an ovate-lanceolate spathe convolute at the base, about five inches long, and described to be of a brownish colour; the spadix also brownish, terete, half an inch thick, and two inches long. Introduced by Mr. Bull from the Solomon Islands, and sent out in 1878, and now flowered for the first time in Europe by the Compagnie Continentale d'Horticulture.

DAHLIA EXCELSA ANEMONÆFLORA, Maund, (*Botanist*, ii., t. 88; *Gard. Chron.*, N. S., xix., 60, fig. 10).—One of the fine subarborescent species of Dahlia from Mexico, which require a longer summer than ours to perfect their flowers, but which form noble objects in a mild conservatory where there is sufficient height for them. This has been grown as *D. arborea*, but is the same as *D. excelsa anemonæflora* figured by Maund in the work above quoted. It grows 12—20 feet high, and has large bipinnate leaves with the petioles broadly connate; the flower heads are 4 inches across, the flat ray florets being soft lilac, with in some heads a disk of yellow tubular florets, and in others borne on the same plants having the tubular florets larger and of the same lilac colour as the ray, forming an anemone-shaped flower.—Sir G. Macleay.

EPIDENDRUM ARACHNOGLOSSUM, Rchb. fil. (*Rev. Hort.*, 1882, 554, with col. plate).—A handsome Orchid, from New Grenada, forming a tuft of erect terete stems which in the lower half bear distichous alternate glabrous sessile oblong-lanceolate obtuse fleshy leaves, the upper portion of the stem being leafless forming an elongated scape, and terminating in a short corymbiform or roundish raceme of reddish-purple (carmine violet) flowers, of which the sepals and petals are oval oblong acute and recurved, and the lip is three-lobed, the lateral lobes roundish, pectinate at the margin, the middle lobe cuneate deeply bilobed, the divergent lobes also pectinately toothed; the column is club-shaped violet, and the disk furnished with five tuberculate calli, the middle one longer denticulate.—M. Godefroy-Lebeuf.

ENOOTHERA CARDIOPHYLLA, Torrey.—One of the most remarkable and distinct of all the Californian *Enotheras*. It is a perennial, throwing up numerous stems nearly a foot high, with heart-shaped toothed leaves, and funnel-shaped yellow flowers in loose terminal racemes, the tube about two inches long, and the limb an inch across.—W. Thompson.

PENTSTEMON EATONI, Gray.—One of the finest of the genus, allied to *P. centranthifolius* but dwarfer in habit, growing about $1\frac{1}{2}$ foot high, the lower leaves being broadly ovate, and the flowers which are produced in terminal panicles a foot in length, of a rich crimson scarlet, the corolla widening towards the mouth, the limb with five rounded nearly equal lobes; from the Sierra of California at 8,000 feet elevation.—W. Thompson.

PRIMULA SINENSIS HEDERÆFOLIA, Hort.—A new departure in the foliage of Chinese Primroses in which the original palmatifid character of the leaf is retained, but the serratures are obliterated and the margins are entire, so that the outline of the leaf is very much like that of the ivy, *Hedera Helix*.—Carter & Co.

YUCCA RECURVIFOLIA VARIEGATA (*Illust. Hort.*, t. 475).—This very handsome hardy Yucca has been called *Y. gloriosa recurvifolia foliis variegatis*, a name which we have ventured to shorten, as it evidently belongs to the type of *Y. recurva* or *pendula* of

English gardens. The plant like the common form develops a tuft of gracefully recurving leaves, which instead of being plain green, have a broad band of bright yellow-green down the centre, the two edges being deep green; the young leaves have a pale reddish flush over the yellow portion. It is a most desirable plant, and we regret that its history and origin are not recorded.

NEW FLOWERS.

AZALEA, *Duchess of Albany*.—One of a batch of seedlings crossed with *amcena* or one of the other small-flowered species, and producing compact bushy plants very full of small neat flowers; in this case the flowers are smooth, $1\frac{1}{2}$ inch in diameter, white, and very freely produced; 1st-class Certificate R.H.S., Jan. 9, as a useful decorative plant; W. Todman.

BEGONIAS.—*Meteor*, a novel and attractive variety, colour bright orange in the centre, changing to a reddish orange tint, and becoming decidedly red at the edges of the two broad petals; habit dwarf and very free. *Reading Beauty*, a beautiful variety, producing large and handsome creamy white flowers which become lighter in tint as they develop; the foliage is similar to that of *B. Pearcei*; a distinct variety that is likely to become a great favourite. Both from Sutton & Sons.

CARNATIONS.—The following are being sent out by Mr. C. Turner:—*E. S. Dodwell* (Hewitt), C.B., full size, finely formed, good broad petals of great substance and well marked, fine. *Flirt* (Abercrombie), S.F., a good smooth flower, bright and well marked. *Jessica* (Turner), R.F., large, finely marked without spots, petals and shape extra fine, a good grower. *Jupiter* (Abercrombie), S.F., a fine large flower, smooth and well marked. *Master Fred* (Hewitt), C.B., full size, fine form, great substance, very smooth, and beautifully marked, extra fine.

PRIMULA SINENSIS.—*Improved Vermilion Queen*, a variety with large stout flat finely-formed flowers, nicely fringed, and of a bright carmine-scarlet; a finely finished flower of remarkable quality; Carter & Co.—*Magenta Queen*, a valuable variety quite distinct in colour, being of a beautiful shade of bright rosy-magenta; compact in habit, and the flowers, which are of large size, are freely produced and rise well above the foliage; Sutton & Sons.—*Princess of Wales*, very free, with fine heads of large well-formed nicely fringed flowers, of a pretty delicate blush, soft and pleasing in hue, and one that cannot be too highly commended for its decorative qualities; Cannell & Sons.—*Swanley White*, a very pure white of fine quality, without trace of the blush tint that spoils many of the so-called white Chinese Primroses; Cannell & Sons.

NEW FRUITS.

MELONS.—*Emerald*, a superb green-fleshed variety handsome in form, finely netted, delicious flavour, and every way first-rate; Carter & Co.—*Masterpiece*, a very fine scarlet-fleshed melon of first-rate quality, globular in form, handsomely netted, and of great value for exhibition purposes; has received several 1st-class Certificates of merit; Sutton & Sons.—*Welford Park Seedling*, also a very fine scarlet-fleshed variety, round, handsome in appearance, distinctly ribbed, the skin thin, smooth, and of a clear golden colour, the flesh bright red, rich and melting; 1st-class Certificate R.H.S.; Sutton & Sons.

NEW VEGETABLES.

CUCUMBERS.—*New Golden Frame*, a variety raised at the Royal Gardens, Hanover, and thought to be the first yellow frame cucumber ever introduced to this country. The fruit, when ripe, is cream-coloured, attaining a deeper hue as it ripens; smooth in texture, evenly marked with small spines, re-

markably prolific, hardy, and of good flavour. It does well in a cold frame, and is said to be valuable for salading. *Sutton's Cluster*, said to be a cross between *Volunteer* and *Telegraph*; is a very prolific variety, 12 to 16 inches in length, of a bright green colour, and excellent shape. Both from Sutton & Sons.

PEA.—*Latest of All*, a late green marrow variety, standing well up to the end of August or early in September; strong and robust in habit, resists drought and mildew; a heavy cropper bearing large pods; of excellent flavour; height 3 ft. *President Garfield*, a fine main crop variety; pods of a beautiful bright green colour; highly flavoured; hardy constitution; height 3 ft. *Reading Giant*, a prolific and excellent pea; pods large, well filled; flavour excellent; robust and distinct in habit; height 4 to 5 ft. All from Sutton & Sons.

POTATOS.—*Magnet*, a variety raised by Mr. C. Ross; a good-sized second early kidney of fine shape, with clear bright skin; flesh lemon colour, extra fine quality; Sutton & Sons.—*Harlequin*, a coloured sport from Rector of Woodstock, having all the good qualities of this variety, with a handsomely blotched appearance; Sutton & Sons.

VEGETABLE MARROW, *Muir's Prolific Hybrid*.—This is said to be a cross between Moore's Vegetable Cream and Hibberd's Prolific; in shape it is very distinct, a little more in length than in girth; cream colour, with a great depth of flesh, and fine flavour; very free bearing; Carter & Co.

NEW PUBLICATIONS.

The **BOTANICAL MAGAZINE** for January contains:—*Doryanthes Palmeri*, Hill. [t. 6665], a fine Queensland Amaryllid, with a tuft of spreading recurved plaited leaves 6—8 feet long, having a tubular brown tip 4—6 inches long, and an erect flower stem 8—10 feet high, bearing a compact thyrses, 3 feet long of large showy funnel-shaped fleshy flowers, which have a short tube and linear oblong segments, and are scarlet on the outer, white on the inner face. Kew.—*Nemastylis acuta*, Herbert [t. 6666], an American Irid from the S. W. United States, with ovoid bulbs, linear plaited leaves, and forked flower stems a foot high, bearing a few 6-petalled expanded flowers, described as azure blue but represented as lilac. Kew.—*Babiana ringens*, Linn [t. 6667], "one of the first Cape bulbs known to botanists," often introduced but soon lost; it has globose bulbs, linear plicate leaves, and hairy stems $1\frac{1}{2}$ foot high, bearing below the middle a second raceme of two-lipped bright crimson flowers, the upper spikes represented by bracts. Kew.—*Microstylis metallica*, Rehb. f. [t. 6668], a terrestrial Orchid, about 6 inches high, with 4—6 elliptic acute plicate purple leaves, and a slender scape bearing a raceme of minute flowers, with linear purple sepals and petals, and an obovate yellow lip, sagittately angular at the base; native of Borneo. —*Cereus cespitosus*, Engelm. [t. 6669], a showy dwarf Cactus, often cultivated as *C. echinatus*; it has 12—18 ribbed stems 6—8 inches high, cylindric ovoid, of a pale greyish colour, the spine-tufts (pulvilli) close set with 20—30 pectinately arranged straight appressed white or rosy spines, and bearing at the crown deep rose-coloured flowers three inches across; from New Mexico and Texas; Kew.

The **GARDENERS' CHRONICLE** (Dec. 23—Jan. 20) contains the following novelties:—*Nerine atrosanguinea*, Cam (p. 808), a very fine winter-flowering hybrid *Nerine* raised by Mr. O'Brien from *N. Plantii* crossed by *N. flexuosa*; it has broadish rather glaucous leaves, and a scape 16 inches high, bearing an umbel of 8 broadly campanulate flowers of a bright rosy-salmon, the segments linear-oblong apiculate, with a prominent midrib and wavy margins; the winter-flowering habit comes from *N.*

flexuosa; Dr. Cam.—*Odontoglossum Jenningsianum limbatum*, Rchb. f. (p. 808), a pretty variety having a sulphur-coloured margin around the sepals and petals, where *O. Ruckerianum* (also called *Edithiæ*) shows the edge mauve colour; C. Winn, Esq.—*Cattleya Schofieldiana*, Rchb. f. (p. 808), a fine novelty allied to *granulosa*, with slender stems 16 inches high and $\frac{3}{4}$ inch in circumference, two leaves 6 inches long, and light greenish-yellow flowers, of which the petals are peculiar in being narrow at the base and very broad and blunt at the tip; the lip has the side lobes whitish, and the middle lobe rich amethyst purple covered over with lamellæ and papulæ; G. Law Schofield, Esq.—*Cyrtosperma Johnstoni*, N. E. Brown (p. 808), a remarkable and handsome Aroid the leaves of which are semi-erect, arrow-shaped, veined with red, on mottled petioles which bear irregular whorls of stiff spines and flesh-coloured bands above the spines; the peduncles, which resemble the petioles, bear an ovate-lanceolate brownish spathe 5 inches long, enclosing a terete spadix two inches long; Solomon Isles.—*Dendrobium ionopus*, Rchb. f. (p. 808), an Eastern Dendrobe of the Pedilonum section, with yellow flowers smaller than those of *D. cumulatum*, in short racemes; it has two purple blotches on the flat three-lobed anterior part of the lip, and four red blotches on the trifid border of the androclinium.—*Cælogyne (Pleione) birmanica* (p. 840), a Burmah plant closely allied to *C. præcox*, but differing in the more depressed bluish purple pseudobulbs, in the lip of the flower which is denticulate not fimbriate, in the disk bearing three instead of four or five keels, and in the subentire not fringed anther bed; the white disk has several round or oblong brownish blotches; it flowers later than *C. præcox* itself; Low & Co.—*Agave Victoria Regina*, T. Moore (p. 841, figs. 148, 149), this fine Mexican Agave has recently flowered in the Cambridge Botanic Garden, U. S.—*Masdevallia porcelliceps*, Rchb. f. (vol. xix., p. 10), the pig's-head *Masdevallia*, so called from the resemblance of its minute buds to a young pig's head; it is one of the interesting tiny species, with cuneate oblong-ligulate leaves, and yellowish flowers speckled with brown, the petals white, and the lip covered with brown warts; allied to *M. campyloglossa*; J. O'Brien.—*Anthurium crassifolium*, N. E. Brown (p. 10), a fine plant supposed to be from Colombia, acaulescent, with large ovate lanceolate bright green leaves as thick as cardboard, obtuse shortly mucronate, rounded and then shortly cuneate at the base, the under side yellowish green dotted with brown; the spathe is broadly-oblong, reflexed, light green; sent by Mr. Williams to Kew.—*Lælia elegans prasiata indica*, Rchb. f. (p. 10), an unusually long name for a fine variety, in which the glaucous green sepals are margined with brown, the purple petals are green at the base, and the lip is splendidly coloured with "the most brilliant white and the purest warm purple."—*Ribes Lobbi*, Asa Gray (p. 11, fig. 1), a Californian species, with deep reddish-purple flowers, suggestive of fuchsia blossoms, figured in *Bot. Mag.* some 25 years ago as *R. subvestitum*; hardy; Kew.—*Schaueria flavicoma*, N. E. Brown, and *S. calycotricha*, Nees (p. 14), two handsome stove Acanthads usually confounded but distinguished by Mr. Brown, the former having the lanceolate leaves, narrower longer and more acuminate than those of the latter, the calyx being ciliate with numerous distinctly visible gland-tipped hairs; while in the latter the leaves are broadly ovate with an obtuse or subcordate base, and the calyx is glabrous or very slightly puberulous; both are from Brazil, and are handsome decorative plants.—*Calanthe lentiginosa*, Rchb. f. (p. 44), a lovely hybrid Orchid between *C. labrosa* and, as is supposed, *C. Veitchii*; it has obpyriform bulbs, and white flowers changing to ochrey-white; the lip, which has three blunt

keels, is large four-lobed, plaited, with numerous purple spots, and the flowers have a long curved hairy spur. Veitch & Sons.—*Trichocentrum Pfavi zonatum*, Rchb. f. (p. 44), an interesting variety with flowers larger than in the type, which appears to yield many variations both in the form and colouring of the flowers.—*Odontoglossum hebraicum lineoligerum*, Rchb. f. (p. 44), a very pretty Orchid, which has been mistaken for a yellow crispum, the flowers being of a sulphur yellow with hieroglyphic markings of red-brown resembling Hebrew letters, and which in this case run out into lines and spots.—*Alpinia mutica*, Roxb. (p. 44), a noble Scitamineous plant from Bornea, noticed at p. 10; W. Bull.—*Justicia campylostemon*, T. Anders. (p. 44), a small shrubby Acanthad, about two feet high, with ovate or ovate-lanceolate leaves, and small white flowers spotted with purple; Natal; Kew.—*Dendrobium chrysanthum anophthalmum*, Rchb. f. (p. 44), a pretty variety without the usual dark spots on the brilliant yellow lip; G. Marriott.—*Pinus contorta*, Hort. (p. 45, fig. 5), a handsome hardy pine of bushy habit, with the old branches spreading deflexed or twisted, the leaf tufts each containing a pair of linear acute often twisted leaves densely set upon the branches; the elongate ovoid cones grow in pairs; from California; Barron & Son.—*Vitis gongylodes*, Baker (p. 53, fig. 8), a fine stove creeper from Para, with winged quadrangular stems, bold ternate leaves, and divaricate compound heads of inconspicuous flowers; the extremity of almost every branch after a time swells into a tuber, quadrangular and winged like the stems, which becomes disarticulated, falls to the ground, and produces a young plant; it has also adhesive disks at the ends of the tendrils; Cambridge Botanic Gardens.—*Lælia anceps Calvertiana*, Rchb. f. (p. 78), a beautiful variety in the way of *Dawsoni*, with narrower petals, and having the side lobes of the lip with a fine rosy edge, and the middle lobe wholly of a fine magenta purple, the purple lines on the yellow disk being lighter and not confluent; Joseph Calvert, Esq.—*Haplocarpha Leichtlinii*, N. E. Brown (p. 78), the *Gorteria acaulis* of gardens; a free-flowering perennial requiring protection in winter, producing numerous short shoots from the crown; the leaves are 6—12 inches long, lyrate pinnatisect, the scape a foot long, tomentose, and the flower-heads 2—2½ inches across, the ray florets bright yellow stained with purple on the outer side; South Africa; Kew.

The GARDEN (Oct. 21—Jan. 16) contains plates of *Imantophyllum miniatum Martha Reimers* [pl. 359], the finest of all the varieties of this gorgeous plant; its massive heads of blossom contain numerous large flowers which are of an orange red colour, with a yellow centre; of continental origin.—*Viola pedata bicolor* [pl. 360], a charming North American Violet, with slender pedately cut leaves, and moderate-sized lilac-blue white-centred flowers in which the two upper petals are of a deep velvety violet colour, forming a strong and beautiful contrast.—*Telopia speciosissima* [pl. 361], the Waratah of New South Wales, a grand Proteaceous plant, with bluish-green leathery cuneate-oblong toothed leaves, and large corymbose heads of peculiarly-shaped crimson flowers, surrounded by bracts of the same colour; a fine old plant now rarely met with.—*Exacum macranthum* [pl. 362], a very handsome stove perennial, growing about 2 feet high, and bearing, through the summer months, large deep blue flowers in axillary and terminal corymbs; one of the handsomest of the Gentianworts.—*Cereus (Echinocereus) gonacanthus*, Engelmann [pl. 363], a handsome *Cereus* from Colorado, with seven-ribbed stems, three to four inches high, simple or sparingly branched from the base, the areoles large orbicular distant, with robust angled straight or variously curved spines, the flowers near the apex, scarlet,

"open night and day."—E. C. Loder, Esq.—*Agave Victoria Reginae*, T. Moore (p. 448), a woodcut showing the long spicate inflorescence of this remarkable species, from a photograph taken in the Cambridge Botanic Garden, U.S.; the plant is a native of the mountains of Northern Mexico.—*Anemone palmata alba* [pl. 364] a rockwork gem with cordate-orbicular, obtusely lobed toothed leaves, sessile tufted bracts, and 10—12 sepalled flowers, which are white with a yellowish tinge near the centre; T. S. Ware.—*Utricularia montana* [pl. 365], which has a striking resemblance to some Orchid, though its relationship is far distant.—*Sobralia xantholeuca* [pl. 366], a tall reed-like Orchid, with lance-shaped plaited leaves, and large terminal clear yellow flowers of great beauty.—*Orchis foliosa* [pl. 367], a charming terrestrial Orchid, with broad lanceolate leaves, and tall spikes of purplish flowers varying in tint and marking.—*Dendrobium infundibulum* [pl. 368], one of the gorgeous nigro-hirsute Dendrobies in the way of *D. formosum*.—*Ochna multiflora* [pl. 369], a singular plant representing the order Ochnaceæ, introduced so long since as 1820, but now seldom seen; it is a stove shrub, with oblong evergreen wavy leaves, and yellow flowers of which the calyx grows on and becomes of a brilliant red, reflexing so as to display the ripening fruit, which is of a dark purple colour.—*Vanda Hookeriana* [pl. 370], the handsome species described at p. 155 of our volume for 1882.—*Lilium Martagon album* and *L. dalmaticum* [pl. 371], the one with white, the other with almost black flowers of the recurved type.—*Cypripedium Morganie* [pl. 372], a handsome hybrid between *superbiens* and *Stonei*.

The GARTEN-ZEITUNG (Nov.—Jan.) contains a coloured figure of a hybrid *Anthurium*, a cross between *A. pedato-radiatum* and *A. leuconeurum*; it has palmately-lobed leaves intermediate between those of the parents.—*Selaginella grandis*, Moore, the figures reproduced from the *Gardeners' Chronicle*.—*Sprekelia glauca*, Lindl., an old garden plant, and like its ally *S. formosissima*, the Jacobæa Lily, not so much grown as it deserves to be. The coloured plate of the January number represents a group of decorative plants; the number also contains an illustrated article on the American Vine Mildew, of which we have given an abstract at p. 18.

The REVUE HORTICOLE (Nov. 1—Jan. 16) contains coloured figures of the *Kishmish Ali Grape*, a black variety which seems to be mixed up with the Frankenthal.—*Tritoma Saundersii*, a handsome and free-flowering species from Natal.—*Echeveria retusa speciosa*, a very superior form of this useful plant, which is more than usually floriferous.—*Epidendrum arachnoglossum*, from New Grenada, a showy species with erect leafy stems, the leaves distichous, alternate, oval-oblong obtuse, wanting in the upper part of the stem, which forms a long peduncle to the roundish or corymbose raceme of deep violet crimson flowers, the lip of which is three-lobed, with roundish pectinately lacinate lobes; grown by M. Godefroy-Lebeuf.—*Caraguata cardinalis*, a gorgeous Bromeliad, allied to *C. linguata*, with a vase-shaped inflorescence of brilliant scarlet bracts, of which the inner ones are tipped, some with yellow and some with white; introduced from New Grenada.—*Streptosolen Jamesoni*, the pretty slender twiggy stove subshrub better known in this country as *Browallia Jamesoni*, the former name being however now adopted by Bentham and Hooker in the *Genera Plantarum*; it was figured in the *Bot. Mag.*, t. 4605, in 1851.

The JOURNAL DES ROSES (Nov.—Jan.) gives good portraits of the following varieties:—*Madame Boll*, raised by M. J. Boyau père of Angers, a strong-growing H.P., with the flowers large and full, of a bright carmine rose colour and highly perfumed.

Rêve d'Or, a Noisette of extremely vigorous habit, with large and beautiful flowers of a delicate yellow, paler towards the edge, and with coppery reflections in the interior. *Madame la Comtesse de Jaucourt*, a vigorous-growing H.P., with stout foliage, and moderately full extremely odoriferous flowers of a delicate rose-colour, shaded with salmon in the centre, and silvery at the edge; obtained in 1863 by M. Desmazares from seeds of *Triomphe de l'Exposition*, and sent out in 1866 by M. Cochet.

GARDEN GOSSIP.

THE grand Indian MAGNOLIA CAMPBELLII is likely to flower this year for the first time in Europe in the grounds of W. Crawford, Esq., Lakelands, near Cork, there being at present over thirty flower buds on it. We trust that nothing may interfere with the development of its gorgeous flowers. The tree is not growing in the garden trained to or receiving the protection of a wall, but as a standard in a low-lying portion of the grounds, at a considerable distance from the garden, and quite near the foreshore of that portion of the estuary of the Lee known as the Douglas Channel, as we learn from the *Irish Farmers' Gazette*.

— REFERRING to the new PINE-APPLE LADY BEATRICE LAMBTON, in a recent number of the *Gardener*, which we regret to see has been brought to a close, Mr. D. Thomson, who is well known as an expert amongst pine growers, writes:—"When Lady Beatrice Lambton Pine-apple was sent out we procured two plants of it, and have now well-nigh a score in fruit. Having adopted the most rapid way of increasing it within our knowledge, we find that none of the plants are of that strength to which we consider this variety capable of being grown; nevertheless, our ripened fruits have ranged from 7 lb. to 9 lb. But it is not its size to which we wish to refer, but its appearance as a dessert fruit, and, above all, its quality. The shape of the Pine is unique, being a perfect cone, the colour being very bright, tinted with red, and the crown very small. Its quality has been praised without any reservation. We know of no pine so juicy: when it is cut the juice follows the knife in a stream. The flesh is melting and rich in flavour, something in this respect like a Prince Alfred when at its best. This pine seems to be a very free fruiter; for we have not failed in fruiting a single plant that we wished to start, even in a very young state. It seems to require much less water than Smooth Cayennes and Charlotte Rothschilds; in this respect it classes itself more with Queens. Those who grow pines for exhibition would do well to display their very best culture in this Pine, for it is uncommonly beautiful in both shape and colour. Its fault is that it is a tall grower like Prince Alfred, but like that Pine, more of it can be grown in the same space than Smooths or Rothschilds—it is such an upright grower."

— THE destruction of the PHYLLOXERA was the subject of a statement by M. Dumas in November last, at a meeting of the French Academy. At the very beginning of its work the Academical Commission for the destruction of the Phylloxera proposed to arrange for the immediate destruction by fire of each plant proved to be infested; but objections being made to this scheme, grounded on the state of French legislation on rural

property, the Commission desisted. M. Dumas now states that he has in hand an official report from Switzerland establishing the soundness of the views taken by the Academy on this important question. The cantons of Geneva, Vaud, and Lucerne, having resorted to the destroying process, have saved the bulk of their vines, of which the value exceeds £40,000,000, at the expense of a few thousand pounds. A special tax had been imposed on the proprietors of vines, for the purpose of compensating the owners of the plants thus destroyed.

— **T**HERE is a fine collection of **TROPICAL NYMPHÆAS** at **EATON HALL**. The *Gardeners' Chronicle* (p. 435), after remarking how seldom one sees tropical aquatic plants properly grown, or even grown at all now-a-days, goes on to say that Eaton Hall is one of the places where Nymphæas are still grown, and they are so beautiful that the wonder is they should be so much neglected. One explanation probably is that they are of little use for cutting or decorative purposes. Without undervaluing flowers put to such uses, the plant-lover will always prefer to see his favourites growing. The sight of plants in healthy growth is a much more satisfactory experience than the inspection of plants bought and used as so much furniture or millinery, of which any amount may be had for money. The aquarium at Eaton consists of a central oblong tank, well stocked with Nymphæas of various colours.

— **W**RITING ON **TOMATO CULTURE** in the *Field*, J. S. W. argues that "a mistaken notion exists concerning the habit of the tomato. As a rule, pinching is recommended to make the plant fruit, but this it does not need at all; in fact, pinching hinders both growth and productiveness. A tomato allowed to grow unrestricted pushes laterals freely along its whole stem, and these branch out freely again, producing quantities of flowers at all points. The plants will require to be thinned; that is, whole shoots will need to be removed at times; but on no account should the shoots left be cut or shortened. Run them out into fruit, and let them expend their force there."

— **S**OME remarkably **LARGE CLUSTERS OF GRAPES** continue to be grown by Mr. Roberts, in the gardens of Lady Emily Bury, Charleville Forest, some of which have been staged at the recent winter show of the Royal Horticultural Society of Ireland. In the class for six bunches, Mr. Roberts took first prize, one bunch of the six—a Gros Guillaume—being remarkable both for its size and symmetry. This bunch is reported to have measured 2 ft. 6 in. in length, and about the same transversely across the shoulders, and to have weighed 18 lb., being for so large a bunch well finished and symmetrical. This magnificent cluster was, it appears, cut from the same vine which produced the mammoth first prize bunch recently shown at Edinburgh.

— **H**AS any one tried **HOT WATER AS A RESTORATIVE FOR SICKLY PLANTS**? M. Willermoz some time since related that plants in pots may be treated with hot water when out of health; ill-health, he maintains, ensues from acid substances in the soil, which being absorbed by the roots, act as a poison. The small roots wither and cease to act, and the upper and younger shoots consequently turn yellow, or become spotted, indicative of their morbid

state. In such cases the usual remedy is to transplant into fresh soil, in clean pots with good drainage, and this often with the best results. But his experience of several years has proved the unfailing efficacy of the simpler treatment, which consists of watering abundantly with hot water at a temperature of about 145 degs. Fahrenheit, having previously stirred the soil of the pots so far as may be done without injury to the roots. Water is then given until it runs freely from the pots. In his experiments the water at first came out clear, afterwards it was sensibly tinged with brown, and gave an appreciable acid reaction. After this thorough washing, the pots were kept warm, and the plants very soon made new roots, immediately followed by vigorous growth.

— **O**NE of the most useful of winter flowering plants is *Centropogon Lucyanus*, producing, as it does, vast quantities of bright rosy red *Æschynanthus*-like blossoms, which not only show themselves in large clusters at the end of every shoot, but appear at almost every joint, for when the tops are cut or cease flowering the plants break again below, and continue more or less gay. The habit of the plant being somewhat loose and spreading, it may be grown in baskets suspended from the roof of the house, where it shows itself off to advantage, being moreover all the brighter for the extra share of light. When grown in pots it must be tied up, if neat specimens are desired.

— **W**HE are informed that the **HORTUS BELGICUS**, a Catalogue of the plants cultivated in Belgium, drawn up by Prof. Morren and M. Devos, is now completed, and will be published by the Federation of the Horticultural Societies of Belgium. We shall look for it eagerly, as an instalment—and doubtless a large and important one—of the much needed *Hortus Europæus*, which has been so long talked of.

— **R**EGARDING the adaptability of **STOCKS FOR APPLES AND PEARS**, Dr. Stoll, of Klosterneburg, asks pomologists and fruit growers: What sorts of Pears do not thrive well on the Quince? What kinds of Apples do not thrive well on the Paradise Stock? If any of our readers can supply the information we shall be ready to find space for it.

— **A** NEW vegetable styptic has appeared in the *TRADESCANTIA ERECTA*, brought from Mexico, during the French expedition to that country. It has the property when chewed or crushed of stopping any hæmorrhage; its action exceeding that of all styptics as yet known, perchloride of iron for example. The plant, which is a free-growing annual, was planted in a garden at Versailles, where it has not only flourished, but flowered and fruited without having its peculiar properties appreciably diminished. In favourable seasons it reproduces itself by self-sown seeds.

— **A**MONG **STRAWBERRIES**, **RODEN'S DUKE OF EDINBURGH** has been much extolled in the *Journal of Horticulture*. It appears to be uninjured by wet, and though light in colour, is of delicious flavour. It ought to be grown by every gardener; and then, no matter how wet the period during the strawberry season, a dish of delicious strawberries could be had. Moreover, it has a long

season, and every blossom appears to produce a perfect fruit. It is recommended for a main crop strawberry.

— **THE POTATO** was discovered in a wild state by Mr. J. O. Lemmon while on a tour of botanical exploration last summer among the mountain ranges along the Mexican frontier of Arizona. He found two or three varieties of indigenous potatoes growing abundantly in high mountain meadows, surrounded by peaks attaining a height of 10,000 feet above the sea level. The tubers were about the size of walnuts. Of them Mr. Lemmon brought with him a supply, which will be carefully cultivated.

— **THE new BOUVARDIA ROSEA FLORE-PLENO**, a variety with double rose-coloured flowers, has been recently exhibited by Mr. F. W. Böttcher, nurseryman at Eimsbüttel, near Hamburg. This novelty is said to have originated after grafting the double white Bouvardia, Alfred Neuner, on the scarlet *B. leiantha*. The flowers are said to last for a remarkably long time. The experiment will no doubt be repeated, as the interest attaching to the origin of this variety, if correctly reported, is very great. The variety named President Garfield is said to be a direct sport from Alfred Neuner, and, so far as we have seen, is of too pale and washy a pink to become a very attractive plant, or to compete with the pure white of its parent. It is to be hoped that M. Böttcher's plant is of a more decided colour.

— **THE Garten-Zeitung** points out a very easy, but by no means novel, way to kill THRIPS AND RED-SPIDER, which is quite worth another trial. The writer's directions are to take a tub large enough to dip the largest show plants in, and fill it with clean hot water at a temperature of 133° Fahr. Into this the plants are plunged for four seconds, not longer; and it is averred that this will kill all the living insects, though a second immersion is perhaps necessary to completely destroy the young undeveloped insects. The temperature of the water should not be allowed to fall below 122° Fahr. In this way a large collection of Azaleas was treated when they were taken out of doors in the spring, and again when they were taken in in the autumn, and neither the young shoots in spring nor the flower-buds in autumn suffered in the least. Dracænas, Myrtles, Crotons, and other plants were successfully treated, the young tender leaves not being in the least injured.

— **THE GARDENERS' YEAR-BOOK for 1883** (171, Fleet Street) is, as usual, judiciously filled with reference matters likely to be useful, and with records of the past year, such as new plants, new flowers, &c., likely to be consulted by horticulturists generally. The price is nominal.

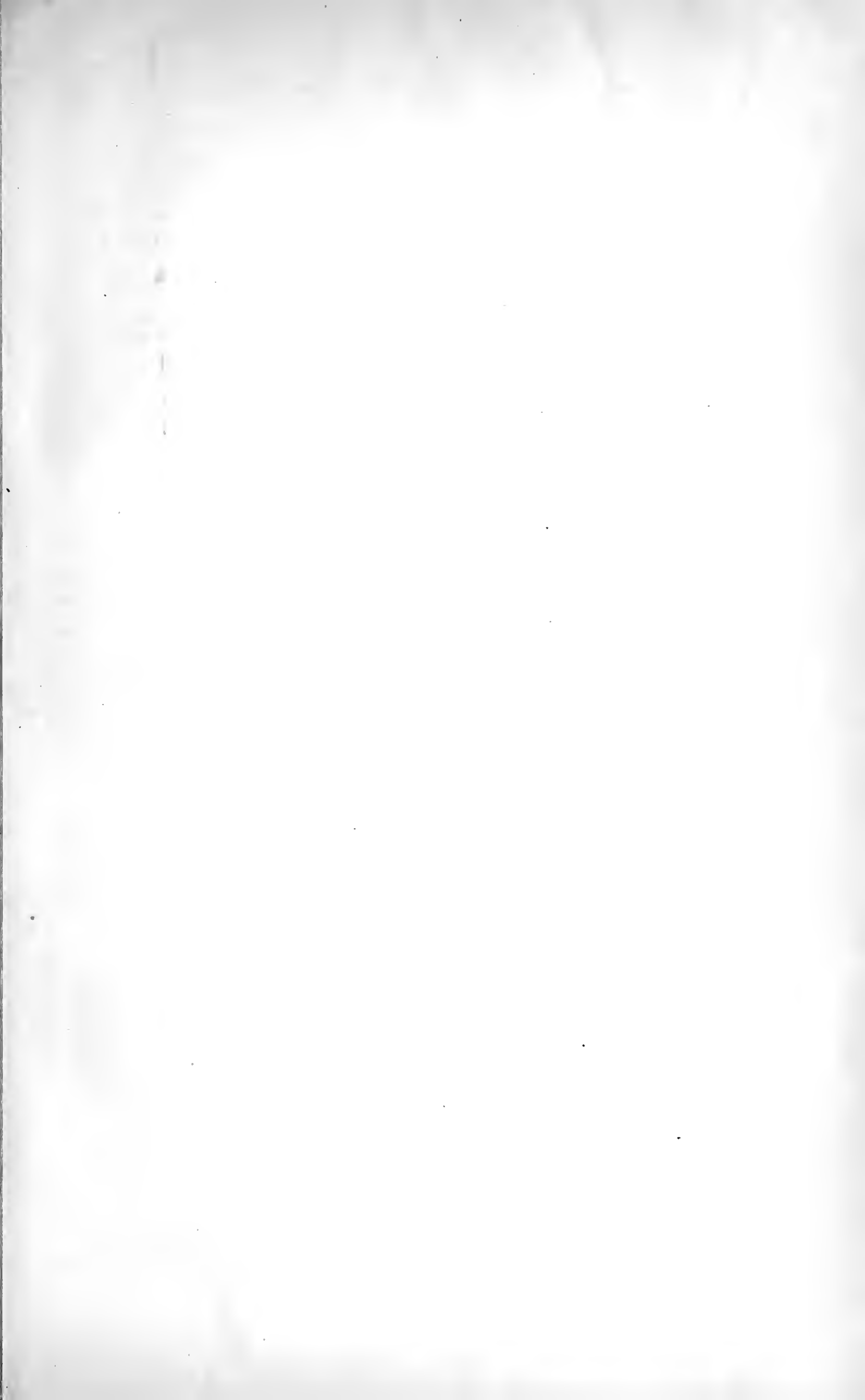
In Memoriam.

— **MR. JOHN HEPWORTH**, one of the olden type of Florists, died on January 2, having completed his 81st year in October last. He was born in 1802 at Wyke near Halifax, and in early manhood commenced to grow Polyanthus and Auriculas as an amateur. There he continued

for many years, but afterwards removed to Huddersfield, where about 1838 he commenced to propagate Tulips both from bulbs and seeds. After a time he went to reside at Lea Bridge, but returned to the neighbourhood of Huddersfield, where he has lived for the last twenty years. As already noted, he was formerly a grower of Auriculas, and was the raiser of True Briton (Hepworth's True Briton), still one of the best of white-edged varieties. Mr. S. Barlow, himself the *facile princeps* of Lancashire Tulip growers, informs us that Mr. Hepworth "must have been a Tulip grower for nearly half a century [45 years], and has raised a large number of seedlings, including many gems, amongst which the following may be named:—*Bybloemens*: William Parkinson, Bessie, Dauntless, Queen of May, John Henry, Sylvester, John Dalton, Nulli Secundus, Samuel Barlow, Blondel, &c.; *Roses*: Nanny Gibson, La Brillante, Mrs. Barlow, Miss Burdett-Coutts, May Queen, Lady Burnett, Comet, &c.; *Bizarres*: Sir Samuel Romilly, Abie Lincoln, &c. He was not quite so successful in Bizarres as he was in Roses and Bybloemens, but he has among his unnamed seedlings some Bizarres, which, with care, will take rank amongst the very foremost; and especially has he struck a rich vein in Red Bizarres, having several that surpass the well-known Dr. Hardy, in depth both of yellow and red and also in brilliancy of colour. Many of his unnamed Rose and Bybloemen seedlings are also of the very highest quality." In person our late friend was quiet and undemonstrative, but earnest and thorough; and he was much esteemed by all who had the pleasure of his acquaintance. He officiated as one of the judges at the last Northern National Auricula Show; and indeed for many years has been selected as a judge at most of the principal florists' exhibitions in the north of England. Mr. Hepworth was an occasional contributor to the pages of the *FLORIST*, and was especially zealous and logical in his advocacy of the establishment of two classes of yellow-ground as of white-ground Tulips for the red and purple marked varieties respectively.

— **ROBERT WRENCH, Esq.**, died on January 22 at Gilamont, Surbiton, aged 70 years. Mr. Wrench, who was educated at Winchester and Oxford, was the youngest son of Jacob Wrench, the founder of the firm of Wrench & Sons, Seed Merchants, London Bridge, had been in failing health for the last three years, and had been for some time confined to his house. He was elected Treasurer of the Gardeners' Royal Benevolent Institution in 1849, and being a warm supporter of the Institution, he has during that long period zealously discharged the duties of his office. He was Master of the Drapers' Company, and a member of the Board of Management of Dulwich College.

— **MR. WILLIAM WARD**, gardener to the Lady Emily Foley, Stoke Edith Park, Herefordshire, died recently, quite suddenly, at the age of 57 years. He commenced his gardening career in Jersey, where he served four years in a nursery garden; he next entered the gardens of the Duke of Devonshire at Chiswick, and afterwards became manager of the kitchen garden at Hampton Court for Messrs. Jackson & Son; from thence, some sixteen years ago, he took charge of the Stoke Edith Gardens. Mr. Ward was a good practical gardener, well acquainted with fruits; and, being a man of high principle, persevering, and truthful, he secured the esteem and respect of his employers and of all who knew him.





Auricula Mrs. Moore

AURICULA MRS. MOORE.

[PLATE 581.]

AT the show of the Southern Section of the National Auricula Society held last year at South Kensington, several seedling varieties were adjudged worthy of First-class Certificates, and amongst those in the grey-edged class which received this testimony to their merit, was the beautiful variety we now figure, and of which Mr. Douglas pronounces our plate to be a very faithful delineation.

The variety was raised by Mr. Douglas, late of Loxford Hall, now of Great Gearies, Barkingside, to which place he has removed with his employer, F. Whitbourn, Esq. Mr. Douglas is well-known as one of our best and most successful southern auricula growers, and his success as a raiser has also been well marked, as witness the variety Mabel figured by us last year. Of the present novelty the following is the description, as noted in April, 1882, when it was Certificated:—"MRS. MOORE, an extra fine flower, with very symmetrical truss, and having a round rich golden tube, dense circular paste, bright maroon ground

colour, and very fine smooth edge; a large finely-rounded flower, regular in all its parts." The number of high-class new flowers which was brought out on this occasion should be regarded by Auricula growers as an encouragement to perseverance in raising novelties, since the seedlings, if they spring from judicious crosses, can scarcely fail to bring a fair share of gratification and reward. The fact that the trade growers cannot at the present time meet the demands made upon them for a supply of plants, is a sufficient indication that there is room for new and varied seedlings. Moreover, though the novelties may not all or any of them be such as to supersede a few of the finer named flowers of auld lang syne, —on the other hand they may be decided advances—yet they will certainly be valued as supplementing to a very material degree the available supply of these good old sorts, many of which it is so difficult to obtain. We are pleased to be able to introduce here some seasonable remarks by Mr. Douglas.—T. MOORE.

THE AURICULA : SPRING NOTES—SEEDLINGS.

MARCH and April are the two Auricula months. The fancier who has been carefully tending and faithfully watching his pets through the hard frosts of winter, or what is worse, the wet gusty months of autumn, will now rejoice to see the development of the rising trusses and the beautifully fresh and varied leaves, some of them, as in the case of Mr. Horner's beautiful seedling Sapphire, having the foliage like the mountain snow for whiteness. Taylor's Glory, Reid's Acme, Smith's Ann Smith, Summerscales' Catherina, Kay's Topsy, Campbell's Pizarro, Sims' Vulcan, and others, have all beautifully powdered foliage of various degrees of whiteness, but none of them are anything like so pure as Sapphire. Even in the green-leaved varieties there is a considerable difference of colour and form, so much so, that the fancier could name his whole collection by the foliage alone. A great part of his pleasure also consists at this season in showing his collection to his friends, especially those like-minded with himself.

There is a strange fascination about this simple Alpine flower, which those who have not studied its characteristics cannot understand. Any one desirous of practising patience need only accompany an Auricula fancier on a visit to see the collection of a friend, and if he can wait patiently until the two have done inspecting the Auriculas he will do for anything.

The opening flowers are very sensitive, and are checked in their development by frosts at night, and cold winds by day. Many persons have no other accommodation for their plants than cold frames; and I have proved by experience, that with care in ventilation and protecting with mats at night, a collection can be flowered well in frames. Indeed, such a large grower as Mr. Meiklejohn, of the Raploch, near Stirling, has no other accommodation for his collection of 2,000 plants. A heated pit has no doubt many advantages over ordinary frames, as the frosts can be kept out easily, and the plants can be attended to and inspected in all sorts of weather. Water-

ing must also be very carefully done: no plant should suffer for lack of it, but if they get too much, the foliage will be flabby, and the flower stalks will not be stout and elastic as they ought to be.

The pips must also be thinned out at this time. There are often more flowers on a truss than it will properly carry, so that each flower may perfectly develop itself. The outer flowers on the truss are the best, those nearest the centre will sometimes lack finish. The florist likes an odd number, and fancies that five, seven, nine, or eleven pips make up the best trusses.

Every owner of a good collection of Auriculas should be a raiser of seedlings. There has been quite a revolution in the raising of Show Auriculas during the last decade. The Rev. F. D. Horner and Mr. Ben. Simonite, both in the north, have been very successful indeed. I also have been doing a little in the south of England, with a fair measure of success. The grey-edged variety *Mrs. Moore*, of which an excellent representation is given in this number of the *FLORIST AND POMOLOGIST*, was raised in 1879 by crossing Heap's Smiling Beauty with the pollen of Douglas's Silvia. Another variety of good properties from the same seed-pod was named *Jumbo*; my notes of that variety when it first flowered are: "Good petal, greenish grey edge, rich tube, and good dark ground colour." It flowered with an edge nearly green last year. Several other varieties selected from our seedlings at Loxford have taken prizes and certificates at the great National exhibitions in London, the most notable being Mabel, which not only gained the first prize in its class, but received a 1st-class Certificate, and gained "Premium" as the best Auricula in the whole exhibition.

In order to reach a high position in the raising of seedlings, it is necessary to make a large number of crosses amongst the best sorts, and to raise at least 200 or 300 seedlings every year. The raiser of 20 or 30 seedlings may be fortunate in making a good hit, but it is quite plain that the raiser of the larger number of plants has ten chances to the other's one. The young seedlings are now rapidly appearing above ground, and must be pricked out in small pots, as soon as the plants are large enough to handle. I prick

out about a dozen plants in a small sixty; and when they have grown sufficiently for the leaves to overlap each other a little, they are again repotted, this time three or four plants in the same sized pot; the next time they are repotted singly, the plants will ultimately flower in small and large sized sixties. Some growers do not treat their plants quite so well as this; but will rather allow them to flower in boxes, where they have been planted three or four inches apart.

In hybridising, to save seeds, the classes ought not to be mixed. It is best to cross a green edge with another green edge, and a white with a white edge, &c. Many selfs will appear amongst the edged crosses, but they are generally inferior to those obtained by crossing selfs with each other.—J. DOUGLAS, *Ilford, E.*

LES PLANTES POTAGÈRES.*

HERE in this somewhat bulky volume, MM. Vilmorin have given us a record of the results of their observations on the almost endless varieties of cultivated vegetables—observations such as few establishments could have undertaken and successfully worked out, and which when completed could not have been put to better or more useful account. The volume, in truth, forms a complete dictionary of kitchen garden plants, and a ready reference to all useful information respecting them and their cultivation. The subjects are arranged alphabetically, the most convenient for reference of all methods of classification, and though the arrangement in this case has been objected to on the ground that it is founded on the popular French names of the plants, we do not see how a book written in French and addressed to French readers, could very well have been arranged otherwise, unless indeed it were under their scientific names, which would have been cumbersome in the seed shop, as well as uncertain of application, since concerning even these the doctors disagree. After all, the matter of the book is of far more importance than its arrangement: let us see of what it consists.

* *Les Plantes Potagères, description et culture des principaux Légumes des Climats Tempérés.* Par Vilmorin-Andrieux et Cie, Marchands Grainiers, 4, Quai de la Mégisserie, Paris.

The bulk of the volume is devoted to the descriptions of the several varieties which have come under the observation of the authors; and here the differences between the varieties of each kind of vegetable are very clearly set forth. Take the Lettuce for example: we find that its scientific name and natural family, its synonyms in various languages, its native country and its duration are stated, and then follows about a page of general and historical remarks before the descriptions of varieties are taken up. The primary division of the varieties is into *Laitues pommées* or Cabbage Lettuces, and *Laitues Romaines* or Cos Lettuces. The first group is sub-divided into *Laitues d'hiver*, *Laitues de printemps*, and *Laitues d'été*. The second group is sub-divided into *Romaines d'hiver*, *Romaines de printemps et d'été*, and *Romaines d'été*. The numerous varieties are arranged under these several headings, and of each of them the synonyms, the description, and any special remarks on culture not covered by the general observations are inserted. Throughout the book, the information is thus full and complete, the shorter subjects having the special headings of Culture and Usage following the descriptions. The whole is very freely illustrated by carefully drawn portraits of the principal varieties.

Besides vegetables proper the work includes Pine-apples, Strawberries, Melons, &c., which rather belong to the dessert than to the culinary department. The *Pommes des terre* are included. The weight in grammes of a litre of the seeds, the number of seeds in a gramme, and the duration of their germinative powers is given in a tabular form, as well as embodied with the descriptions. There are besides, an introduction, and a remarkably full index, by which latter any variety, under any of its synonyms, may be found at once, a most valuable feature in a book so full of detailed information.

It will thus be seen that *Les Plantes Potagères* consists of a most carefully prepared series of descriptions of the vegetables, salad plants, pot herbs and culinary plants of all kinds, usually cultivated in gardens, the whole illustrated profusely by figures drawn to scale and giving truthful representations of the objects described. The grateful thanks of all

who have to deal with the subject in any of its phases are due to the authors for producing a work so complete and comprehensive in its design, and so thorough and trustworthy in its execution.—T. MOORE.

THE SCABIOUS AS A WINTER FLOWER.

THIS not over-pretty name is applied to distinguish a very pretty flower. Though generally looked upon as an annual, both useful and used for summer decorations, it is also most suitable for flowering in the winter as well as in the spring months. The few flowers I send [varied and very striking] do not give a full idea of their value as winter-flowering plants. The variety is just now limited, as we have been cutting freely from the stock, and the best flowers are run upon; but nevertheless they give one a fair indication of their worth, their long stems being not the least valuable part of them.

For winter and spring work the seed can be sown out of doors in August, the plants being lifted and potted up before the first frosts come on, and housed in comfortable quarters where sun and air can be given them. They establish themselves very quickly, and may be kept in the pots they are first put into, or shifted on for spring supply if they should happen to be then in demand. We have seven or eight different colours, but use them as fast as they open. I hope to send you the whole set of colours later on.—H. KNIGHT.

THE ROYAL HORTICULTURAL SOCIETY.

THE ROYAL HORTICULTURAL SOCIETY held its Annual Meeting on February 13, the Right Hon. Lord Aberdare, President, in the Chair. The report of the Council having been taken as read, the President said that they had been under a very heavy cloud, knowing that as the lawsuit with Her Majesty's Commissioners had gone against them, the Society was responsible for the costs—a sum of over £900; and as a consequence they were not last year able to balance their expenditure with their income; the expenses of the lawsuit had, however, been somewhat mitigated by an increase of £500 in miscellaneous receipts, but the Society was still left £379 to the bad. The Commissioners now being masters of the situation the Council naturally expected a considerable diminution in the number of Fellows, but the number of four-guinea Fellows had only fallen from 449 to 427, whilst the number of Fellows paying two

guineas had increased from 956 to 970. The Royal Commissioners had let the gardens for this year to the Commissioners of the International Fisheries Exhibition, who had shown the utmost courtesy, consideration, and liberality to the Society. Under the arrangements with the Fisheries' Commissioners the Society would retain its standing at Kensington this year; and, as to the future, committees had been named by the Royal Commissioners of the Exhibition of 1851 and also by their own body to negotiate. It was not, however, likely that the deliberations would be pushed on very fast during the tenure of the Fisheries Exhibition. It had been said that they had maintained the litigation with the Commissioners with too much pertinacity, but the facts showed that the debenture-holders had a reasonable claim which the Society was bound to defend, and did defend at a cost of £911. The Society's financial position was not due to the acts of the present Council. It was due to the unfortunate disputes at the time of the International Exhibition, which had cost the Society the loss of Fellows representing £4,000. They had done their best for the debenture-holders. New Fellows continued to join in considerable numbers.—The report was unanimously adopted, the retiring officers were re-elected, and the vacancies in the Council filled up by the election of Sir C. Strickland, Sir P. Cunliffe Owen, and Colonel Beddome.

VINES AND VINE CULTURE.

CHAP. XXIII.—GENERAL MANAGEMENT.

BY General Management is here meant all that relates to the maintenance in the houses of those atmospheric conditions that may be requisite for the proper cultivation or development of the Vines or their fruit. Requirements vary so much that it would be simply impossible, even were it desirable, to lay down hard and fast rules to be followed in every case; much, very much, must always be left to the discretion of the cultivator.

Since the introduction of cheap glass, Orchard Houses, Ground Vineries, and other unheated structures for the cultivation of the Vine, the term Forcing, at one time very expressive of a definite condition, has become nearly obsolete. Any means that may be adopted for the forwarding of the growth of a plant to a greater extent than would take place naturally, may be termed Forcing. Heat is the motive power. The Vine growing in an unheated Orchard House—that is, not heated artificially—is forced by solar heat to a certain degree. Some Vines are forced in spring to induce them to commence growth early; others require forcing in autumn, to ripen their fruit.

Vines may be forced into growth and to

bear fruit at any season of the year, provided—and provided always—that the wood is properly ripened. Early forced Vines of one season force more easily the following year, and established Vines always more easily than young ones; indeed young Vines—excepting pot Vines—should not be hard forced.

To secure early grapes, say in April, the Vines should be started into growth in November. The period of time required from the commencement of growth to the ripening of the fruit is for the Black Hamburg about five months. Thus, Vines started in March should have fruit ripe in July, and those coming naturally into growth by the end of March in August and September. The Muscat of Alexandria, Alicante, Lady Downe's Seedling, and other late grapes, require nearly six months to ripen and finish properly.

All Vines should be started sufficiently soon to have the fruit ripe in the early part of September, for grapes ripened later than September require a great amount of firing to finish them, and do not keep well through the winter. The grapes ripened in September are the latest that arrive at full maturity.

If, say on January 1st, we take as an example, a Vinery from which ripe grapes are required to be cut in the month of June, the management necessary to secure this end may be stated in general terms as follows:—

1. *Temperature.*—At the commencement a night temperature of about 60° will be sufficient until the Vines have started to grow. The heat should be raised gradually to 70° by the time they come into flower. When the grapes are fairly set a lower temperature may be maintained until after the stoning period, when, if necessary, a rise of a few degrees may be allowed. When the grapes commence to colour a lower temperature may be maintained, but fire-heat is almost always required in order to maintain a bracing atmosphere.

For day temperatures a rise of 5° by fire-heat may be allowed in dull cold weather, and of 10° or more, if by sun-heat up to 80° or 90°, as the season advances. In very cold weather, however, it is better to have a lower temperature than to maintain a high one by overheated pipes.

2. *Ventilation or Air-giving.*—The object

sought to be obtained by ventilation is not merely the maintenance or regulation of the temperature, but also the admission of fresh air, which is a most important factor in the well-being of plants. The night temperatures are mostly regulated by the amount of firing or heat applied, but the day temperature, or amount of sun-heat, is regulated by ventilation. In vineries a little air should be given at the top ventilators early in the morning, or as early as it may be observed that the temperature has risen or is rising above the required point, and this air should be gradually increased as the day and the temperature advances, and later on should also be reduced in a like manner, endeavouring if possible to shut up early enough to secure a slight rise in the temperature after doing so. We prefer shutting up early at all times, and "bottling up," as it were, the sun's warm rays, to the rigid rule of keeping to a given temperature, and the consequent early application of fire-heat for its maintenance. As the grapes begin to colour air must be given freely both by day and by night, on both sides of the house, &c., so that a bracing atmosphere may be secured.

3. *Moisture*, in its relation to the atmosphere, is of the greatest importance to the healthy progress of the Vine, and demands special attention. A close moist atmosphere is necessary to induce the buds to break freely, and afterwards it is necessary to assist in supplying nutriment to the Vines through the leaves. A very great proportion of the vital energies of plants is absorbed through the leaves. Again, moisture is necessary to prevent the destruction of the leaves by the inroads of insects, such as red spider, &c.

From the commencement, then, a moist atmosphere must be maintained, and the higher the temperature the greater the evaporation, and the greater the amount of moisture required. It is difficult to supply too much. When the Vines are started they should be syringed regularly several times a day, especially if the weather be bright and warm, beginning as soon as it may be noted that the temperature is rising, and so on, varying as to time according to season, &c. This treatment may be continued until the grapes come into flower, at which period a somewhat drier atmosphere should be main-

tained until they are fairly set. Syringing the Vines overhead must from this time be discontinued, as, on account of the lime present in almost all waters, the grapes become spotted and soiled by its use. Young Vines on which there is no fruit may, however, be syringed with advantage. Every portion of the house and border should be freely syringed at all times, and the atmosphere thus kept well charged with moisture.

When the grapes begin to colour a somewhat drier atmosphere is required, and by the time they are ripe the atmosphere should be kept as dry and bracing as possible. After the grapes are cut, if it be during the growing season, the syringe should be again freely employed, to thoroughly cleanse the leaves and wood, and its use continued until they ripen off thoroughly.

All Vines in vineries, at whatever period they may be started into growth, will require treatment or management on principles somewhat similar to those here laid down. It has been the custom of most writers on the cultivation of the Vine to give tables of temperature for both day and night, to be followed strictly during the season, but never having seen, or having derived any benefit from the use of such tables, we prefer to state general principles that may be understood and followed out by every one as circumstances may admit.—A. F. BARRON, *Chiswick*.

EUPATORIUM GRANDIFLORUM.

ALTHOUGH the majority of the Eupatoriums are amenable to the general routine of management, the *Eupatorium grandiflorum* appears to benefit by special and careful cultivation. I have rarely seen it in a creditable condition, and I attribute the cause of failure to the system of management which it appears to require. In the shape of young plants I have found it to succeed admirably under the following treatment.

To obtain good-sized flowering plants the first year, cuttings should be struck as early in the season as possible, selecting the young growths when about three inches in length, and inserting them singly in small pots of fine soil, and plunging them in a bed with a brisk

heat. They quickly make root, and must be potted on as the roots extend. They will make rapid progress if kept in a genial temperature, fully exposed to light, near to the glass; it is important that throughout their season of active growth they should receive no check, against which every precaution should be taken. The pots I find most suitable for them to bloom in are 5 in., 6 in., or 8 in. pots, using a soil consisting of two parts turfy loam, to one part peat and leaf mould, adding sand and charcoal to secure porosity.

When the growth is advanced under glass, and judiciously hardened off, which it will be by midsummer, remove the plants to a situation out of doors, fully exposed to the sun, plunging the pots in ashes or cocoa-nut fibre. It must be borne in mind that there is to be no stopping of the shoots, as the plant flowers very imperfectly when stopped. As in the case of the chrysanthemum, the less stopping the finer the blossoms.

During September they should be removed to a light pit or house with a genial temperature. They do not succeed well in a draughty house with ordinary greenhouse plants; and plants that have been grown in pots must be assisted with frequent applications of liquid manure, which greatly enhances the size of the blossoms. Let those who complain that young plants do not flower so freely as old, give them a fair trial, and I am sure they will not be disappointed. We had young plants with terminal panicles of blossoms, 12 to 18 inches in length, of the purest white, in which state they are extremely elegant, one of the most effective of decorative plants, and very useful for cutting. If properly hardened off and planted out upon a warm garden-border after May, lifting carefully in September, they make good plants, and guarding against checks, these will also produce fine flower-heads.

The *Eupatorium Wendlandii* is a strong growing variety with an upright habit of growth, which attains a height of from 4 to 5 feet. The plants consist of a number of stems springing from the root, each bearing a terminal cyme of white inflorescence, the lateral branches also having each a terminal flower-head. This *Eupatorium* being a robust grower, holds its blossoms for a length of time, and is a strikingly effective plant for decorative purposes, standing well in an ordinary conservatory; and it succeeds *E. grandiflorum* as to its season of flowering.—GEORGE WESTLAND, Witley Court.

VEGETABLES FOR AMATEURS.

AS the season is now at hand when many of your amateur readers will be getting in their stock of seeds for the forthcoming season, it has occurred to me that a few notes on what the writer has proved to be good varieties in their several classes may be of use to at least a portion of them. It may be rather late for this in some cases, but I learn from two or three seedsmen that early in March is generally the busiest time with them in supplying seed to the class whom I mainly address. In making these notes I have no wish to depreciate the practice of purchasing the collections made up by many seedsmen, further than this, that those who know what they require can, in my opinion, get better served by purchasing their own selections from the catalogues, than by buying what the seedsmen make up. I know several amateurs and others who do this now, and who a few years ago used to get seedsmen's collections.

To begin with *Peas*, which I name in the order of earliness, omitting the small round White varieties that were usually grown as the earliest until within the past few years, when better varieties have been offered. First Early: American Wonder, Kentish Invicta, Day's Sunrise, and Advancer. Second Early: Criterion, Dr. Maclean, Yorkshire Green, and Veitch's Perfection, and if a supply of tall stakes can be had, Champion of England may well be added. Late varieties: Maclean's Best of All and Omega, and with the same proviso as in second early class, Ne Plus Ultra and Emperor of the Marrows, both of which are splendid croppers and fine peas in all respects.

Broad Beans: Beck's Dwarf Gem, and Broad Windsor are good.

French Beans: Osborn's Forcing, Negro Long-Podded, and Canadian Wonder are bad to beat in the Dwarf class; the old Scarlet being the best of the running varieties.

Beets: Dell's, Crimson and Nutting's Selected Dark.

Broccoli, for late autumn use: Veitch's Self-Protecting and Snow's Winter White; for spring: Veitch's Spring White, Leamington, Lander's Goshen and Model, are all good, the last named being in my experience the best late Broccoli sent out for years.

Brussels Sprouts: Imported and Aigburth, the latter being a very productive variety, but almost too large on rich soils for some gentlemen's tables.

Cabbages: Atkins' Matchless, London Colewort, and Wheeler's Imperial.

Cauliflowers: Veitch's Extra Early Forcing, Early London, Autumn Giant, and Walcheren.

Celery: Sandringham White, Ivery's Nonsuch Pink, and Major Clarke's Red.

Leeks: Muselburgh.

Lettuces, Cabbage varieties: Early Paris Market, Stanstead Park, and Victoria. Cos: Hicks' Hardy White, Paris Green, and Black-seeded Brown Cos, the first and last named being capital Cos varieties

for sowing in August to come in the following spring.

Onions: White Spanish, Danvers' Yellow, Brown Globe, and James' Keeping are the best for spring sowing; Flat Italian Tripoli and Giant Rocca for autumn sowing.

Radishes: French Breakfast and Wood's Frame are good early sorts, with Red and White Turnip for summer use.

Savoy: Early Dwarf Green Curled.

Spinach: Round for summer, and Prickly for winter and early spring use.

Tomatos: we find a selection from Hepper's Goliath to be as useful as any of the many sorts now advertised.

Turnips: Purple-Top Munich, Early Snowball and Veitch's Red Globe are all reliable.

Vegetable Marrows: Short Jointed Long White.

Of *Potatos*, which perhaps should have been first instead of last, we find the true old Ash-leaf, when to be had, Veitch's Improved ditto, Prince Arthur, Haigh's Seedling, and Magnum Bonum the best Kidney-shaped varieties; with Early Coldstream, Dalmahoy, Schoolmaster, Vicar of Laleham, and Champion in the Round class.

Of *Cucumbers*, which most amateurs grow, I would strongly recommend Telegraph and Tender and True among the larger varieties, with a good strain of Sion House in the shorter ones.

I might have extended this list very much, but preferred only to name those varieties that I have proved to be good in their several classes.—H. J. CLAYTON, *Grimston*.

MR. BARRON ON VINE CULTURE.*

WE have to announce the recent publication of a profusely illustrated volume on Vines and Vine-culture.

A considerable portion of the contents of its twenty-six chapters has during the past ten years appeared in our pages, and therefore it becomes us to speak with some reservation as to its value to grape growers and students of Vine-culture; but the well-earned reputation of the author, and the results attained by him in reference to this department of fruit culture during the years in which the Royal Horticultural Society's Garden at Chiswick has been placed under his supervision, enable us to say without fear of contradiction that Archibald Barron stands in the very front rank of British Vine growers—and this being established, it follows as a matter of course that what he has to propound or to write relating to the subject, must be sound, practical, instructive, and reliable reading.

So much of the author. Of the book we

* *Vines and Vine-culture; being a Treatise on the Cultivation of the Grape Vine, with Descriptions of the Principal Varieties.* By Archibald F. Barron, &c., &c. London: 171, Fleet Street. To be had also of A. F. Barron, Royal Horticultural Garden, Chiswick.

may say that there is no other which so thoroughly works up all the ins and outs of the subject. From the "eye" to the perfected "long-rod," from the "bud" to the "berry" and the "bunch" we are told all about it with a fulness of detail, and an abundance of illustration which makes every item so plain that "he who runs may read," and not only read but comprehend. The vine border, the vineries, the methods of propagating, pruning, and training the plants, the manipulation, maturation, and storing of the precious fruit, the diseases to which vines are subject, the insect enemies which affect them—all these and the scores of other matters which make up successful Vine culture, receive full attention, and most of them ample pictorial illustration.

We believe there is nowhere to be found in our language so complete and thorough a descriptive list of the best sorts of Grapes, and here Mr. Barron's prominent position at Chiswick has served him in good stead, since it has enabled him to observe and note the peculiarities of all the better sorts of Grapes, and thus to arrive at a true estimate of their value for garden culture. The results of these observations are embodied in the descriptions here given, and add immensely to their value to the practical cultivator, whose aim is to avoid all possible risks of failure. This portion of the book is illustrated by thirty plates engraved to scale, from photographs of what are considered as the very best, the *crème de la crème* of the varieties cultivated at the present day.

These facts, which are unquestionable, fully justify us in asserting that here we have the best book on Vines and Vine-culture yet issued from the press, and they also enable us conscientiously to commend it to the notice of all those who take interest in the subject of Grape growing.—T. MOORE.

MIGNONETTE.

AFTER cultivating this tiny herb for a great many years, I found that it had certain peculiarities which had to be attended to if we would develop its chief merit—the sweet odour of its blossoms. The plant is a weedy-looking tender annual, for although we may see Tree Mignonette in

greenhouses two or three years old, the normal condition of the plant is annual, and by no means very hardy, though this might be disputed, as during the long summer days we see it growing freely in situations by no means sheltered.

I once had a neighbour, a gardener, who had a Vine border with which he did not feel satisfied, and he wheeled it out and wheeled another into its place, but made of very different materials, for being in the heart of Cheshire and where maiden loam abounds, he made the staple of his border of grassy turves, perhaps 200 years old. When it was finished, he sprinkled the surface with a few seeds of Mignonette, which grew and developed until it hid the earth of the border. There was no coddling here, for the plants tillered like wheat, each one covered nearly a yard square, and the odour was perceptible long before you saw the Mignonette that bloomed so finely on the outside of the border.

A few years after I had to plant a very steep bank with Roses, and it was needful to put in large stones to keep the bank from slipping down. When this was done, the stony surface of the bank was not agreeable to the eye, so I grouted the joints of the stones with clay and cow dung, and sowed it with Mignonette, and whether it was the Southern aspect that warmed it, or the new maiden loam that fed it, I know not, but its odour affected the air for nearly half a mile, this being no doubt assisted by the experiment being carried out on a high terrace but well sheltered from the north.

Whatever this plant may endure from dryness, it must not be soaked in wet, and if soil has been used for other plants it will not grow Mignonette worth owning. Maiden loam, shelter, ample space between the plants, hanging up the watering-can for these, are all symptoms of better days dawning upon us, not only for tender annuals, but for the supplies of more important subjects.—A. FORSYTH, *Salford*.

THE GHENT QUINQUENNIAL HORTICULTURAL EXHIBITION is fixed to open on April 15, and close on April 22. The programme is very comprehensive, the plant classes of the prize schedule being 268 in number, while 23 classes are devoted to the department of objects of art and industry connected with gardening.

SOLOMON'S SEAL AS A FORCING PLANT.

PERMIT me to bring under the notice of those of your readers who may not hitherto be acquainted with it, the merits of the Solomon's Seal (*Convallaria multiflora*) for forcing purposes. It is suitable both for the decoration of rooms and for small greenhouses and conservatories; and is a plant well adapted to meet the wants of the amateur portion of your readers, seeing that it can be easily grown in the summer, and is not at all difficult to force in the late winter or early spring months. We have been using it since the middle of January both as a "greenery" to mix with cut flowers in epergnes, and also as single specimens turned out of the pots into china bowls and vases, and it has been much admired.

The way in which we grow, prepare, and force our stock is as follows:—Any time during the month of March or up to the middle of April, if the weather is moist, we dig up some of the old stools from the shrubby borders, and pull them apart into pieces consisting of three or four crowns. We then choose a piece of a warm border if to spare, give it a dressing of well-rotted dung, take out a trench, and commence to dig it as if to plant potatoes. We plant the tufts as we go, in lines about 16 or 18 inches apart, and the same distance asunder in the lines. The only summer dressing required is to keep down weeds, though if the soil is of a dry nature a good watering once or twice would be beneficial, or perhaps a mulching of two or three inches of manure would be even better. If the crowns are fairly good to start with, as in our case, they can be lifted again in the following October, though another year's stay would as a rule be the best.

When lifted, we pot them into 6-inch pots, and plunge them in ashes until required for forcing. This operation can be carried out in a simple hot-water pit, with an average temperature of 55° to 60°, and as in the case of its relative the Lily of the Valley, a brisk bottom heat of say 80° helps them on more quickly.

We find there are few forced plants that stand such a long time in rooms as Solomon's Seal, though it is as well not to take them directly





Peach Bellegarde

drawn by Severens, Brussels.

from the forcing pit for use there, if it can be avoided. It is better to place them for a day or two at the warm end of a greenhouse.—H. J. CLAYTON, *Grimston*.

THE BELLEGARDE PEACH.

[PLATE 582.]

NO apology is necessary for introducing to our readers this old variety of Peach, for it is, also, a good one, and consequently worthy of being brought forward as a standard whereby to judge the new introductions. Its synonymous names are Galande, French Galande, Ronald's Brentford Mignonne, Noir de Montreuil, &c.

The Bellegarde is not only one of the oldest, but furthermore it is still one of the very best of Peaches. For hardiness of constitution and free bearing properties it is second to none, and consequently it has found a place in every garden where Peaches are grown. For open wall culture it is specially in request.

We owe the fine examples here figured to Mr. Coleman, of the Eastnor Castle gardens, with whom it is a great favourite as an exhibition variety, as well as for supplying the dessert. The late Rev. W. F. Radclyffe, a most successful amateur peach-grower, who also thought very highly of the Bellegarde, first called our attention to its special excellence, and wrote as follows:—"Bellegarde (French Galande) is a noble Peach, and very rare, as the Violette Hative (English Galande), a relative, is generally, almost universally sent out for it; out of ten trees I have only one true to name. The Bellegarde is larger, deeper in colour, blackish-blood, looking when ripe as if Indian ink was veneered into the blood-stained skin, and has dark, very dark, green shining foliage. Violette Hative is of the same family, but smaller, lighter in colour, and earlier."

The *Fruit* is large, round, slightly flattened and hollowed at the apex. *Skin* deep brown or dark red, sometimes very dark indeed. *Flesh* pale greenish yellow, somewhat coloured at the stone, juicy, and of a rich and pleasant flavour. It is a midseason variety, ripening in the early part of September. The *Flowers* are small, dark red, and the deep green *Leaves* are furnished with round glands. It requires to be worked on the Pear Plum, or Damas Noir stock.—T. MOORE.

REGISTER OF NOVELTIES.

NEW PLANTS.

AGAVE (*Manfreda*) **ALIBERTII**, *Baker* (*Gard. Chron.*, N. S., xix., 176).—A remarkable species of Agave, which was distributed in 1877 by Messrs. Haage & Schmidt as *Agave virginica*, and has recently been described by M. Marion as a new genus of Amaryllidaceæ under the name of *Alibertia intermedia*. The plant dies down in winter to a rootstock which is sheathed by fleshy scale-leaves, the 10—12 lanceolate denticulate produced leaves forming a rosette; the peduncle including the lax simple subspicate raceme grows 4—5 feet high, the flowers an inch long, having short pedicels, a funnel-shaped greenish tube, short lanceolate deltoid limb segments, and stamens which are finally exerted more than an inch beyond the segments. The history of the plant is not known.—M. Deleuil.

AJUGA REPTANS VARIEGATA, *Lemoine*, *Cat. Pl. Nouv.*, 1883.—A variety of the common Bugle, with glaucous green leaves bordered by a broad edging of white. Like the type it freely produces its stolons which root at every joint and speedily cover a broad surface. The plant is recommended for mosaiculture, for margins to beds, and for covering bare spaces rapidly, and as a hardy bedding plant will probably become popular. It is in the hands of M. Lemoine, Nancy.

ANGRÆCUM EICHLERIANUM, *Kränzlin* (*Garten-Zeitung*, 1882, 434, fig. 102).—A large white-lipped epiphyte, related to *Angræcum infundibuliforme*. It has tall leafy stems, furnished with distant channelled elliptic leaves, unequal-sided and blunt at the apex, and large solitary flowers with lanceolate light green sepals and petals, and a large helmet-shaped lip, which is white, cuneate at the base, obcordate, deeply emarginate with a triangular apiculus in the sinus, the spur erect narrow straight conical or extinguisher-shaped, and about as long as the sepals, in which respect it differs from the allied species already referred to. Native of Loango in W. Africa.

BEGONIA BRUANTI, *Bruant*, *Cat. Nouv. Hyb. Begonias*, 1882, 3.—A hybrid raised from *B. Schmidtii* fertilised by *B. semperflorens*, remarkable for its hardiness and much-branched growth in the open air in summer, forming large tufts, but seldom exceeding 12—16 inches in height. The erect fleshy red stems are swollen at the joints, and bear velvety purplish-tinted leaves, and well-furnished coral-stalked cymes of white or rosy flowers, produced so freely and abundantly that it may be regarded as a perpetual bloomer. The flowers are white under glass, shaded with rose in the open air in shady situations, and of a soft rose outdoors in the full sun. It was noted in *Revue Horticole*, 1882, 377, under the name of *B. pictavensis*, indicating its origin at Poitiers, where it was raised by M. G. Bruant.

CALANTHE REGNIERI.—A handsome species in the way of *C. vestita*, but with flowers of a more circular form. The leafless pseudobulbs, which are large with a contracted neck, are of a greyish colour; and from their base are produced the woolly flower scapes, 1½—2 feet high, which are furnished with large acuminate bracts, and are drooping at the upper part where the 8—10 flowers are situated. The flowers are about 2 inches across, the elliptic recurved sepals an inch long, white, and the petals, which are of similar size and form, spreading, white with a faint rosy central stripe; the lip is flattish, elbowed or inflexed near the base so as to project forwards, three-lobed, the front lobe deeply emarginate, the whole surface including the column of a lively rose pink, with a deep crimson central spot. The flowers have a slender curved spur about

an inch in length. 1st-class Certificate R.H.S., Feb. 13. Introduced from Cochin-China; Veitch & Sons.

CALANTHE STEVENSII.—A pretty terrestrial Orchid from Cochin-China. It has stout jointed greyish bulbs, and erect hairy scapes drooping at the tip, about 8—10 flowered, the sepals and petals white, spreading, the lip three-lobed, the middle lobe bifid, white with a rosy-purple central spot, the white parts changing to buff as the flowers become aged.—Veitch & Sons.

CHAMÆPEUCE SPRENGERI, *Wittmack, Garten-Zeitung*, 1883, 439, fig. 103.—A very pretty new Herring-bone Thistle, which is regarded as a hybrid between *C. diacantha* ♀ and *C. Casabonæ* ♂. It was raised by MM. Dammann & Co., at Portici, near Naples, and has the habit of *diacantha*, but with somewhat broader darker green linear-lanceolate leaves smooth on the upper side with pallid white nerves, the side veins running out into 2 or 3 marginal spines. The involucre leaves are green and smooth as in *Casabonæ*, and the fragrant flowers which are white are in this respect unlike either parent. This novelty, if sown in March, forms in the first year handsome tufts of a picturesque character, furnished with an abundance of its pretty spine-edged foliage; in the second summer it produces flowers, some of the lower lateral buds not being developed till the third year. It is to be recommended for rockwork and for carpet bedding.—Italian Gardens.

CRATÆGUS OXYACANTHA SEMPERFLORENS, *Bruant, Cat. Pl. Nouv.*, 1882, 8.—A perpetual-blooming Hawthorn, selected from a bed of seedling thorns, in which it had attracted notice from its being found to blossom throughout the summer season, a habit maintained in the grafted plants, which do not cease to show their perfumed white flowers from spring until the close of the autumn. It forms a dwarf very bushy shrub. Specimens sent to M. André in August were reported by him to be in full bloom, the specimens showing at one time the results of three flowerings, namely fully grown fruits, recently set fruits, and abundant corymbs of blossoms. "May in bloom," says the fortunate raiser, "taken to the flower-markets in winter, would not fail to surpass everything else there," and he hence suggests it may be a good shrub for forcing in pots. Raised at Poitiers by M. G. Bruant.

DENDROBIUM FORMOSUM BERKELEYI, *Rehb. f. (Flora)*, 1882, n. s., iv., 534; *Id. Gard. Chron.*, n. s., xix., 110.—This beautiful variety of the old *D. formosum*, Roxb., was noticed last year in the *Flora*, and subsequently in the *Gardeners' Chronicle*, as above quoted. It bears flowers very freely from the sides as well as from the top of the stem. The petals are shorter and narrower than in the type, which gives it a very elegant funnel-shaped form. Some of the plants have a blood-red spot at the base of the column, which has a very good effect. It lacks the sweet scent of the old form, but is notwithstanding a very elegant plant.—Lt.-Col. E. S. Berkeley.

MICROGLOSSA ALBESCENS, *Clarke (Bot. Mag.)*, t. 6672.—A fine hardy or half-hardy shrubby Indian Aster, formerly cultivated as *Aster cabulicus*, but even now very little known. It grows 2—4 feet high, and has slender branches clothed as well as the under surface of the leaves with whitish pubescence; the leaves are lanceolate-acuminate, shortly petioled, 3—5 inches long, and the numerous flower heads, each about one-third of an inch across, form broad corymbiform panicles of a pleasing and showy character; the ray-florets are said to be pale blue, but are represented as light purple. It inhabits the Himalayan range, and flourishes at Kew against a south wall.

MIMULUS LUTEUS VARIEGATUS, *Lemoine, Cat. Pl. Nouv.*, 1883.—A hardy and free-growing bedding

plant, which can also be treated as an aquatic. It is described as a pretty variety, having the foliage spotted and bordered with white.—M. Lemoine, Nancy.

MIMULUS MOSCHATUS RUBER.—A fine hybrid Musk, raised by Mr. Clapham, whose name is so intimately associated with the improvement of Mimuli. It is very dwarf and compact in habit, and produces comparatively large flowers of a reddish buff colour. It is very distinct and a remarkable novelty, richly scented with the odour of musk.—R. Dean.

ODONTOGLOSSUM CRISPUM AUREUM MAGNIFICUM.—A finely-marked variety, possibly a hybrid between *crispum* and *Andersonianum*. It bears stout erect spikes branched at the base, and the individual flowers, which are creamy yellow, are three inches across, the sepals and petals blotched with chocolate red, the lip being of a similar colour. Very distinct and showy. 1st-class Certificate R.H.S., Feb. 13; C. Dorman, Esq.

ODONTOGLOSSUM CRISPUM SCOTTII.—A fine creamy-yellow variety approaching *Andersonianum*. It has flat ovate pseudobulbs, ligulate leaves, and large showy flowers, the sepals entire with large bold spots of chestnut brown, the petals coarsely toothed with fewer and smaller spots near the base, and the lip with prominent yellow crests; 1st-class Certificate R.H.S., Feb. 13; G. F. Wilson, Esq. The variety was named after the exhibitor's son, Mr. Scott Wilson.

PHALÆNOPSIS LEUCORRHODA ALBA.—A charmingly-delicate white-flowered form of this somewhat rare species. It has slightly mottled oblong leaves, and drooping spikes of pure white flowers having the cirrhi of the lip well developed, the lower side of the base of sepals spotted with purple, and the upper side of the lateral lobes of the lip marked with deeper rosy purple dots and streaks; 1st-class Certificate R.H.S., Feb. 13.—Low & Co.

PHILADELPHUS ROSEFLORUS PLENUS, *Lemoine, Cat. Pl. Nouv.*, 1883, 3.—The single forms of Mock Orange rank amongst our finest hardy deciduous shrubs, and some handsome double varieties are already known. That named above is said to be the finest double-flowered variety yet obtained, the flowers being very large, full, pure white, with the wide rounded petals spread out and regularly imbricated. Of garden origin.—M. Lemoine.

PLEUROPETALUM COSTARICENSE, *Wendland MS. (Bot. Mag.)*, t. 6674.—A subshrubby *Amaranthad*, of a showy character when in fruit and then worthy of stove culture—which it requires. It is of stoutish growth, with glabrous stems and leaves, the latter elliptic-lanceolate acuminate, 4—5 inches long, dark green paler beneath; the small green then red flowers grow in very large terminal and axillary panicles, and are succeeded by globose rosy red berries about the size of peas, and of a very showy character. The plant is interesting also for its structure, and as it retains its brilliant berries for several months, is well worth a place in extensive collections; Central America.—Kew.

PRIMULA FLORIBUNDA, *Wallich (Gard. Chron.)*, n. s., xix., 113, fig. 17.—A dwarf half-hardy perennial, with the general aspect of *P. verticillata*, but smaller. It forms tufts of spreading elliptic glandular-pubescent coarsely toothed leaves, narrowed into a broad winged petiole, and numerous erect scapes 4—8 inches high bearing whorls of small clear chrome yellow flowers, with the limb from a quarter to half-an-inch in diameter. It is a native of the Western Himalaya from Kumaon to Kashmir, reaching an altitude of 6,500 feet.—J. Dickson & Sons, Chester.

SPIRANTHES COLORATA MACULATA, *N. E. Brown (Gard. Chron.)*, n. s., xix., 210.—An exceedingly

pretty spotted-leaved variety of an old favourite Orchid, long cultivated as *Stenorhynchus speciosus*, a genus which is now reduced by Bentham to *Spiranthes*. It is a terrestrial plant, with the leaves freely marked with round spots of a much lighter green than the ground colour, the upper portion of the midrib being of the same light green. The flowers grow in a central spike, the bracts, ovaries, and blossoms being of a brilliant coral red; native of Columbia, whence it has been introduced by Mr. Shuttleworth.

NEW FLOWERS.

AMARYLLIS.—*Achilles*, a grand variety of dwarf habit, having flowers nearly 9 inches in diameter, and produced four on the stem; colour rich orange red, paler towards the tips of the segments; very handsome and refined. 1st-class Certificate R.H.S., Feb. 13; Veitch & Sons. *Acis*, a variety of splendid form and very large size, the flowers broadly expanded, centre deep crimson, with the points of the segments creamy white; extra fine. 1st-class Certificate R.H.S., Feb. 13; Veitch & Sons. *Ajax*, maroon, the points merging to crimson, and feathered with white on the edges of the segments; rather dull looking but very distinct; Veitch & Sons. *Fulgens*, bright orange deepening to red; very fine and distinct; Veitch & Sons. *Hera*, deep crimson, very fine and showy; Veitch & Sons. *Pallas*, a gigantic and widely expanded flower, deep crimson tipped with white, and with flakes of white running down towards the centre; Veitch & Sons.

BEGONIAS.—Of Tuberous varieties with double flowers, M. Lemoine has the following novelties:—*André Chénier*, dwarf habit, flowers medium size, very full, imbricated, faultless, of a brick orange colour. *Bastien Lepage*, very large full flowers of a brilliant aurora salmon. *Général Chanzy*, a dwarf hybrid from *Davisii*, flowers medium size, numerous, full, magenta rose. *Le Grand Citoyen*, dwarf erect habit, flowers medium-sized, numerous, very full, imbricated like a camellia, the petals toothed, bright coral colour. *Léon Gambetta*, dwarf and vigorous, flowers very full, broad, often enormous, of the form of a pæony-flowered Camellia, rosy vermilion with a tint of fiery red at the edge.

BEGONIA DISCOLOR-REX.—The following new varieties of this interesting section are offered by M. G. Bruant, of Poitiers:—*Apothéose*, a leafy variety, with broad velvety foliage, the centre brown, the zone formed by white marbling, rosy tinted when young, the broad edges green dotted with white and the margin brown; flowers pretty, of a lively rose. *Madame Boucharlet aîné*, a caulescent variety with short compact stems, the leaves with a magnificent white zone covering a large part of the surface, the edges sprinkled with white dots on an emerald green and bronze ground; flowers bright rose. *Madame Daurel*, a vigorous caulescent variety with the stems and petioles brilliant red, the firm leaves almost entirely of a brilliant metallic white, having a small bronze centre, and an embroidery of the same colour at the edge; flowers deep rose. *Madame Luiset*, a distinct and pretty variety of leafy habit, the leaves large, entirely covered by a multitude of small white dots on a violet-brown ground, with tender green zone. *Madame Treyve*, a variety of hardy character, with robust erect stems and gigantic leaves of a brilliant metallic white, rosy around the conspicuous veins, the centre and edges marbled green and white; flowers large and showy, in large bouquets, very abundant in autumn. *Mrs. Shrubb*, a variety of short stout growth; the large leaves with undulated edges, white washed with bright rose, the centre and edges deep dull green, the colouring very effective; flowers large of a beautiful bright rose. *Professeur Deloynes*, a very beautiful eau-

lescent hardy variety of fine habit, the leaves broad, brilliant metallic white with deep brown green lines along the veins; flowers bright rose. *Sir Joseph Hooker*, a fine variety of erect habit, with large cordiform acute leaves of a rich dark bronze, with a broad regular zone formed by a multitude of small white dots; flowers broad of a beautiful bright rose.

CINERARIAS.—*Victory*, a dwarf-growing robust variety, having very large rich shining magenta-purple flowers, with a dark disk; very large size, stout and fine in form. 1st-class Certificate R.H.S., Feb. 13; H. Cannell & Sons. *March Past*, maroon crimson with a slight white ring round a light disk; very large pip, dwarf robust growth; certificated last year, and now shown in fine condition; H. Cannell & Sons.

DAHLIAS (SHOW).—The following new varieties will be distributed by Mr. C. Turner:—*Buttercup* (Fellowes), yellow slightly tinged with red on the edges, large, fine and constant; an old name given to a new flower of different character. *Bessie* (Turner), lilac, full-sized, constant, excellent form, very pleasing; also an old name given to a new flower. *Cecilia* (Fellowes), pale yellow, very distinct in character; fine petal and outline; very constant. *Consul* (Fellowes), pale orange suffused with yellow at the base of the petals; fine and distinct. *Emperor* (Fellowes), pale maroon, large full and constant; will make a very useful show flower. *Lillie Ward* (Burbury), white, with a tinge of pale rose near the centre; a large full and constant flower of fine petal and outline. *Ronald* (Fellowes), buff, a constant fine and useful flower, good centre and very free. *Rosetta* (Fellowes), purple, large full and constant, excellent form.

The following raised by them are to be distributed by Messrs. Keynes & Co.:—*Condor*, a very peculiar hue of colour, buff shaded with orange; a neat compact flower of a very pleasing character; F.C.C. *Cream of the Valley*, beautiful cream, with slight tinge of salmon; quite new and distinct, and of the finest form. *Hope*, light rosy lilac, large and very constant; a useful and pleasing flower; F.C.C. *Imperial*, deep purple shaded with lilac in a charming manner; large and of splendid form. *Mrs. John Laing*, French white, of excellent form, very free and constant. *Senator*, a very fine purple self, equal to James Cocker in size and symmetry, but of a different shade of colour; F.C.C. *Seraph*, blush, a fine back row flower, centre well up, and of sturdy erect habit. *Sir Garnet Wolseley*, reddish-chocolate, a very large useful flower of good form.

Of FANCY DAHLIAS the following are offered:—*Madame Soubeyre* (Keynes), beautiful rosy lilac striped with carmine; a first-class flower, and most pleasing colour. *Mandarin* (Keynes), yellow striped and mottled with purplish crimson; good outline, well up in the centre, and very constant. *Miss Annie Milsome* (Keynes), yellow with white tip; very constant to character, free flowering, and of good dwarf habit, certainly the best of its class. *Rebecca* (Keynes), lilac, striped with crimson, large, fine shell-shaped petal, very constant.

The following BOUQUET varieties, raised at Slough, will be sent out by Mr. C. Turner:—*Coquette*, orange shaded with yellow, free and attractive, dwarf. *Cupid*, white ground, tipped and suffused with rose, dwarf. *Favourite*, dark maroon with crimson edges, fine form and quality; F.C.C. *Garnet*, orange-scarlet, most valuable for cutting from or bedding out, being very dwarf and an immense bloomer, throwing its numerous finely formed flowers well above the foliage. *Gem*, intense rich scarlet, smooth, finest form, and of a free erect habit; awarded several F.C.C. *Isabel*, bright orange scarlet, very free, effective and of exquisite form; F.C.C. *Little Duchess*, white, with

crimson edges, a charming flower, good form, and excellent habit; F.C.C. *Little Princess*, white, tipped with rose, very pretty indeed, small flowered, very free; F.C.C. *Mabel*, lilac, excellent form, very free; F.C.C. *Nymph*, yellow, tipped with red, very free and effective; F.C.C. *Peacemaker*, rosy lilac, full and good form, very free flowering. *The Khedive*, dark crimson, suffused with white at the base of the petals, very pretty and free.

The following SINGLE DAHLIAS will be distributed by Messrs. Keynes & Co., the raisers:—*Acquisition*, crimson, with scarlet bars at the edge of each petal, very striking; F.C.C. *Aurata*, very fine yellow, wonderfully free blooming. *Defiance*, extra fine scarlet. *Evening Star*, rich maroon; F.C.C. *Fire Fly*, magnificent scarlet. *Fire King*, very rich crimson. *Flavius*, yellow, very dwarf and free. *Grandee*, large rich purple. *Lucifer*, fine scarlet. *Picturata*, very pretty shade of rose colour. *Purple Prince*, very fine purple, exceedingly free. *Red Gauntlet*, deep crimson-scarlet. *Rosy Circle*, rose colour, with white ring round the yellow centre; very distinct. *Striata*, lilac striped with crimson. *Terra Cotta*, colour of terra cotta, very distinct and pleasing. *Velvet Mantle*, very dark crimson. *Vesuvius*, fine dwarf scarlet. *Warrior*, deep crimson.

FUCHSIAS.—*Général Lepasset*, a robust erect growing variety with stout shoots, the flowers compact, with short very thick tube, lively coral red recurved sepals, and ample rosy-violet corolla. *J. J. Rousseau*, a vigorous and floriferous variety, the flowers with recurved brilliant red sepals, and a very full regular bluish-violet corolla, which opens to a globular form. *Jeanne d'Arc*, a very compact bushy variety, 16 inches high and 18 inches through, covered with well-formed flowers having long red sepals and a pure white corolla; a good market plant. *Lamennais*, a dwarf vigorous variety, branching from the base, of close upright habit, the flowers globular with wide recurved earmine-red sepals, and a full white corolla formed of 30 or more petals. *Louis Blanc*, a vigorous grower, with large full often irregular flowers, having bright carmine sepals, and long petals of a pale blue (gris de lin); a new colour. *Victor Hugo*, a variety with very large full flowers, the sepals reflexed bright red, the corolla broad-petalled, crowded, of a lilac rose; a new colour amongst doubles.

MYOSOTIS DISSITIFLORA ALBA.—A true white form of this beautiful Forget-me-not, far in advance of anything hitherto shown under this name, the flowers being large and of the purest white; R. Dean.

PENTSTEMONS.—*Charles Darwin*, habit dwarf, with deep red flowers having a white throat. *Isabey*, flowers very large, of a deep violet with a pure white centre. *Rabelais*, flowers of open form, showing a beautiful white centre, the edges being rosy lilac. *Sculpteur Clésinger*, flowers large, purplish-rose with white centre veined with purple. *Yan 'Dargent*, a very pretty variety, with bright violet coloured flowers, having the throat white, and the lower lobes spotted with purple red. All from M. Lemoine.

POLYANTHUS (Fancy).—*Buttercup*, a sterling variety of fine form and substance; colour creamy yellow, large bold trusses; extra fine for exhibition; R. Dean. *Cardinal*, rich scarlet crimson, very brilliant in colour, large pip, bold trusses, very free; extra fine; R. Dean. *Golden Bedder*, deep orange yellow, fine habit, very free; most effective and an excellent bedder; R. Dean. *Sovereign*, rich yellow, fine in colour, perfect form, large pip, bold truss; extra fine; R. Dean.

Of Hose-in-Hose varieties the following are offered by Mr. Dean:—*Cloth of Gold*, very fine rich yellow, large bold symmetrical trusses; extra fine. *Scarlet Gem*, the nearest approach to a scarlet colour in

the Polyanthus; pips of the finest form and very free.

PRIMULA CORTUSOIDES.—The following new varieties are to be sent out by M. Lemoine, Nancy:—*Auréole*, good habit; flowers lilac veined with mauve, the centre white. *Cérès*, flowers large, circular, bluish-violet. *Nancy*, one of the prettiest varieties yet raised, flowers large, regular, fimbriated, the limb involute, whitish with rosy-violet edges, the reverse side violet.

RHODODENDRONS (Gr. hyb.).—*Baroness Schröder*, a rich golden yellow with red filaments and stamens which give the appearance of a deep red centre and greatly enhances the beauty of the flowers, which are large and produced in a fine umbel. 1st-class Certificate R.H.S., Feb. 13; Veitch & Sons. *Lord Rosebery*, reddish orange; very bright and rich in colour; Veitch & Sons. *Princess Christian*, a very soft pale fleshy pink with dark red anthers, very pretty and pleasing, indeed a most delicate tint, and producing a fine truss of blossoms. 1st-class Certificate R.H.S., Feb. 13; Veitch & Sons. These are all of the R. jasminiflorum type of hybrids, once further crossed with R. javanicum, which has imparted a somewhat stronger habit of growth, and larger foliage.

NEW VEGETABLES.

ONION, *White Leviathan*.—A distinct Onion with the skin pearly white; the bulb has remarkably small rootlets, and is a certain cropper; somewhat later than the Flat White Tripoli, but twice its size; Sutton & Sons.

POTATO, *Cleopatra*.—A variety resembling Magnum Bonum, equal to that variety in size, quality, and productiveness, and quite as early as Myatt's Ashleaf; James Carter & Co.

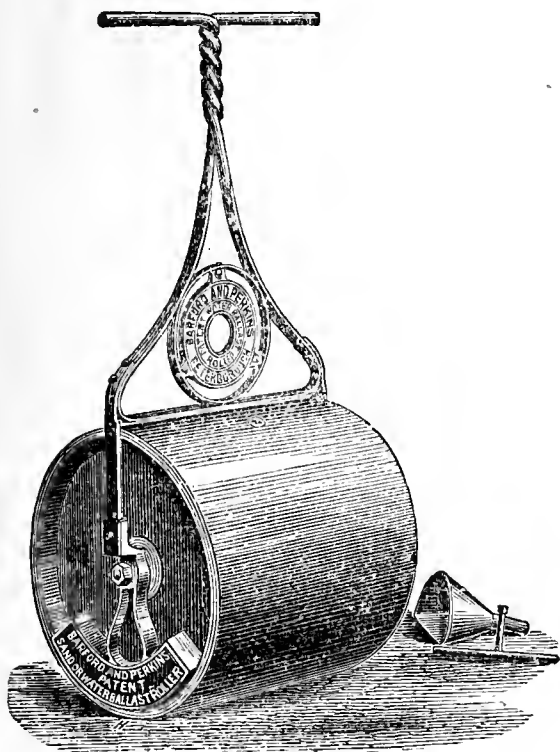
TOMATOS:—*Earliest of All*, a very early variety, coming into use ten days before any other; producing perfectly round, medium-sized fruit of a brilliant red colour, uniform in shape and size, and of a rich mild flavour; a heavy and continuous cropper, that ripens well out of doors; Sutton & Sons. *Reading Perfection*, a new variety of great merit, combining remarkable productiveness with fine quality and large size; handsome in shape, of medium size, almost smooth, brilliant red in colour, ripening uniformly, and therefore well adapted for exhibition; Sutton & Sons.

VEGETABLE MARROW, *Reading Gem*.—A new and perfectly distinct variety, and a most profuse bearer; the fruit 4—6 inches in diameter, of a creamy white colour, slightly oval in shape, and somewhat ribbed; keeps well, and may be preserved till spring in a cool dry room; Sutton & Sons.

NEW GARDEN APPLIANCES.

GARDEN ROLLER.—A new and improved form of Garden Roller has been introduced by Messrs. Barford & Perkins, of Peterborough. These Rollers can be loaded with sand or water, and the cylinders are now made of cast metal instead of wrought iron, which, while it does not affect the efficiency of the implement, permits of their being sold at a lower price. An ordinary 24-inch Garden Roller weighs about 3½ cwt., whereas the new patent 24-inch when loaded weighs 8 cwt., and other sizes in proportion. The latter therefore is not only vastly more effective, but in reality cheaper than any other kind, while it is a manifest advantage to have in one Roller either a heavy or light implement at pleasure. One of the new pattern cast-metal sand or water-ballast Rollers, 18 in. wide and 18 in. in diameter, weighs when empty 2 cwt. 2 qr., and when full 3 cwt. 3 qr. The 24-inch size (width and diameter) weighs 4 cwt. 1 qr. when empty, 8 cwt. when full. The 27-inch, 6 cwt. 2 qr. empty, and 12 cwt. full. The 30-inch, 8

cwt. 2 qr. empty, and 16 cwt. full. The larger sizes may be fitted with moveable shafts for pony or mule, in addition to the handle.



NEW PUBLICATIONS.

The BOTANICAL MAGAZINE for February contains:—*Billbergia Porteana*, Brongn. [t. 6670], a Brazilian Bromeliad, of considerable beauty, now pretty well known in gardens, stemless, with long lorate leaves marked with whitish bands at the back, and a farinose peduncle bearing a lax drooping spike having at the base numerous large bright red bracts, the flowers having a farinose ovary with small deltoid calyx lobes, long green petals which in age roll up spirally, and purple filaments with long basifixed green anthers; Kew.—*Pogonia Gammieana*, Hook. f. [t. 6671], a dwarf terrestrial Orchid, from N. India, tuberous and stemless, the leaves roundish-cordate acuminate, plaited when young and marked between the ribs with shallow pits deep green paler beneath, the petiole streaked with reddish brown; the flowers are in erect racemes or scapes 6—8 inches high, and are drooping with the streaked pinkish sepals and petals connivent or half-closed, the lip pale green; Kew.—*Microglossa albescens*, Clarke [t. 6672], a hardy Himalayan shrubby Aster, rejoicing in no fewer than five generic names; it is erect-growing 2—4 feet high, with petiolate lanceolate leaves bearing white pubescence beneath, and large corymbiferous masses of small azure flower-heads (shown as purple in the figure); known as *Aster cabulicus*; Kew.—*Pseudodracontium Lacourii*, N. E. Brown [t. 6673], a distinct-looking Arad, figured by M. Linden as *Amorphophallus Lacouri*. It has three-parted leaves, each division of two or more oblong or elliptic lanceolate acuminate segments, green spotted with white, on slender erect petioles banded transversely with greyish-red and olive, as also are the scapes which support a pale green boat-shaped spathe 3 inches long, enclosing a spadix of about the same length, having a straw-coloured stipitate, bluntly-conical appendage; Cochinchina; sent by M. Linden to Kew.—*Pleuroptalum costaricense*, Wendl. MS. [t. 6674], a handsome half shrubby Amaranthaceous plant, with elliptic-lanceolate leaves 4—5 inches long, and small greenish flowers, becoming red, in branched panicles, succeeded by globose blood-red shining berries

about the size of peas; Central America; sent to Kew by M. Wendland.

The GARDENERS' CHRONICLE (Jan. 27—Feb. 17) contains figures of—*Masdevallia torta*, Rehb. f. (p. 110), a curious Orchid, with stout cuncate ligulate acute bidentate leaves, and ochraceous flowers, striped and spotted with purple, the tubular portion wide, and the tails sulphur-coloured, the lateral ones twisted; W. Bull.—*Odontoglossum Jenningsianum parceguttatum*, Rehb. f. (p. 110), a white-flowered plant, with very few brown blotches; Veitch & Sons.—*Liparis grossa*, Rehb. f. (p. 110), a botanical curiosity, near *L. pachypus*; with thick pyriform two-leaved pseudobulbs, broadly ligulate obtuse leaves, and an erect raceme of brownish yellow flowers having a white lip and greenish column; Birmah; Low & Co.—*Lalia anceps Percivaliana*, Rehb. f. (p. 110), a distinct variety, in which the lip is truncate at the extremity, and the lateral angles and anterior margin mauve-purple; the front lobe of the lip white for two-thirds of its lower portion, and bearing thereon three keels, of which the anterior ends only are sulphur-coloured, the disk being light orange, the remaining anterior third being mauve-purple; R. P. Percival, Esq.—*Dendrobium formosum Berkeleyi*, Rehb. f. (p. 110), a very elegant variety, more fully described at p. 42; Licut.-Col. E. S. Berkeley.—*Odontoglossum maculatum antennatum*, Rehb. f. (p. 110), an interesting variety, in which an antenna-like styliiform tomentose process is produced on each side of the base of the stigmatic hollow; W. Bull.—*Primula floribunda*, Wall. (p. 113, fig. 17), a pretty dwarf-growing yellow-flowered Indian Primrose, recently exhibited at South Kensington by Messrs. James Dickson & Sons of Chester; see further p. 42.—*Lalia Crawshayana*, Rehb. f. (p. 142), an exceedingly handsome epiphyte, supposed to be a natural hybrid (possibly *albida* × *anceps*, or as others think *anceps* × *autumnalis*); the pseudobulbs and leaves resemble those of *autumnalis*, while the flowers, which grow about two on a long peduncle, have the sepals and petals shorter than in *anceps*, and of a fine deep purple or amethyst; the lip open at the base so as not to cover the column, the side lobes being bluntly angled, and the middle lobe cuneate abruptly blunt, the tips of the former and the greater portion of the latter of the finest purple, the disk with a well-marked yellow median line, three keels, and dark purple divaricate veins; D. B. Crawshay, Esq.—*Lalia irrorata Scottiana*, Rehb. f. (p. 142), another supposed natural hybrid (? *purpurata* × *Cattleya intermedia*), the flowers of which have long narrow acute sepals and somewhat broader acute petals, both of a light rose colour, and a lip with long white side lobes lightly washed with purple at the edge, and an oblong middle lobe of the finest purple, with a broad reddish-brown median line; H. J. Scott, Esq.—*Trichoglottis cochlearis*, Rehb. f. (p. 142), allied to *T. pallida*, with thick leaves much like those of *Sarcanthus rostratus*, unequal-sided and acuminate at the point, and flowers in short racemes, white with purple bars inside and outside the sepals and petals; the thick spoon-like lip with a few purple blotches; the tip of the column is penicillate at each corner; from Sumatra; Veitch & Sons.—*Agave mexicana*, Lam. (p. 142, fig. 22), a representation of a specimen which flowered in the garden of Baron Ricasoli, at Casa Bianca, in Tuscany. The scape was about 25 ft. high, including the thyrsoid panicle consisting of forty-six branches each bearing near the extremity a tuft of its greenish-yellow flowers.—*Agave Alibertii*, Baker (p. 176), a remarkable species having a bulbous rootstock, and racemes of greenish flowers; see p. 41.—*Odontoglossum tripudians Harryanum*, Rehb. f. (p. 210), a very fine variety, the finest yet seen, having the sepals and petals almost

blackish inside, only tipped with light yellow, and with a few yellow markings at the base of the petals; the lip light yellow, the base being almost wholly covered by the richest mauve; Veitch & Sons.—*Odontoglossum triumphans cinctum*, Rehb. f. (p. 210), a grand variety, with a finely developed inflorescence; the sepals and petals are yellow with maroon blotches; the petals having small projecting angles; the broad lip is neatly undulate retuse and emarginate, the claw and extreme base yellow, with the keels reduced, the rest white with predominant maroon blotches, one occupying the whole of the front portion, and smaller ones standing on each side; Veitch & Sons.—*Spiranthes colorata maculata*, N. E. Brown (p. 210), a spotted leaved variety of the old *Stenorhynchus speciosus*; see p. 43.—*Zamia Fischeri*, Miquel (p. 212, fig. 29), though said to have been some forty years in European gardens, is scarcely known outside botanic gardens. It is a small neat-growing Cycad, with short fleshy stems, which bear a spreading crown of leaves composed of about seventeen pairs of narrowly lanceolate leaflets 2—2½ inches long, and slightly toothed towards the tapering apex; the female cones are cylindrical with a short apiculus, about 2 inches long, and shortly stalked; Kew.

LA BELGIQUE HORTICOLE (Oct.—Dec.) contains figures of *Masdevallia Chimera*, Rehb. f. [t. 13], "one of the most fantastic productions of the vegetable kingdom"; found in New Grenada by M. B. Roezl.—*Vriesea tessellata*, E. Morren [tt. 14—16], a fine species now flowering for the first time in Europe. Its bold rigid leathery channelled lorate leaves are beautifully tessellated, and its erectly branching flower scape forms a tall lax panicle of numerous small yellow flowers, which are not of a conspicuous character. It was formerly described as *Tillandsia tessellata*, and is a native of Brazil. This number also contains a systematic enumeration of the ornamental New Plants of 1881.

The GARTENFLORA (Dec.—Jan.) contains *Odontoglossum Murellianum cinctum*, Rehb. f. [t. 1101], a variety with ovoid ribbed ancipitous pseudobulbs, cuneate oblong leaves, and lax racemes of white flowers, the sepals and petals having a mauve-coloured border, and the lip a few reddish-brown blotches on the side lobes and column, and a border of mauve-coloured spots along the edge of the front lobe; J. S. Bockett, Esq.—*Ethionema grandiflorum*, Boiss. et Hohenacker [t. 1102], a very pretty dwarf simple stemmed alpine perennial, forming a tuft 6—8 inches high, with oblong linear leaves, and a profusion of large reddish-purple cruciferous flowers; Elbruz Mts.; Haage et Schmidt.—*Trichocentrum Pfaui*, Rehb. f. [t. 1103], a pretty Central American Orchid, of which the figure—a wood-cut—is reproduced from the *Gardeners' Chronicle*.—*Aphelandra pumila splendens*, Regel [t. 1104], a handsome dwarf stove Acanthad, with lustrous velvety ovate leaves, and spikes of orange-scarlet flowers issuing from acute green bracts; Rio Doce, Brazil; St. Petersburg Botanic Gardens.—*Delphinium cashmerianum*, Royle [t. 1105], a distinct hardy perennial, with 5-lobed hairy leaves, roundish in outline, and lax few-flowered racemes of deep purple flowers; Kashmir.—*Aërides odoratum*, Loureiro [t. 1106], a grand old Indian Orchid, of which a fine specimen is here represented by a woodcut from the *Gardeners' Chronicle*.—*Spiranthes euphlebia*, Rehb. f. (p. 3, 1883), a Brazilian terrestrial Orchid, with rosulate cuneate oblong undulated leaves, and a many-sheathed peduncle bearing a dense raceme of flowers, with the broad sepals and lip white veined with purple brown.—*Rosa Alberti*, Regel (p. 15), a dwarf rose resembling *R. pimpinellifolia*, the branches densely clothed with straight acicular spines; the leaves have ovate acute sharply toothed leaflets, smooth above, pubescent beneath,

and the flowers are white; Thianschan; raised in the St. Petersburg Botanic Gardens.

L'ILLUSTRATION HORTICOLE (liv. 1—2) figures *Cypripedium Spicerianum*, Rehb. f. [t. 473], one of the most striking and distinct of the Indian Lady's Slippers; it is remarkable for its bold white dorsal sepal with a purple keel, projected forwards over the lip.—*Cherry Bigarreau des Capucins* [t. 474], a large oblong obtuse pale red or amber variety with sweet white juicy crackling flesh.—*Yucca gloriosa recurvifolia fol. var.*, Hort. [t. 475], a handsome hardy Yucca, with the leaves banded with yellow down the centre, noticed at p. 27.—*Dendrobium bigibbum*, Lindl. [t. 476], a fine Australian Dendrobe well-known in English gardens.—*Aralia Gemma*, Linden [t. 477], an extremely elegant stove shrub, with long spreading pinnate olive green leaves bearing numerous leaflets which are cut into small narrow lobes at the base, and terminate in a larger ovate segment which is deeply toothed; New Caledonia; Compagnie Continentale d'Horticulture.—*Cypripedium Lawrenceanum*, Rehb. f. [t. 478], a rather highly coloured portrait of one of the finest of the Lady's Slippers, discovered in Borneo, by Mr. F. W. Burbidge.

REVUE HORTICOLE (Feb. 1—16) contains coloured figures of *Fuchsia Abel Carrière*, a hybrid obtained by crossing a form of *globosa* with *corymbiflora*, retaining the twiggy habit and moderate foliage of the former, with something of the corymbiform inflorescence of the latter; the leaves are ovate, the flowers short, suggestive of *F. globosa*, of a brilliant red, the corolla also of a rich blood-red; it is remarkable for its extreme floriferousness; raised by M. Aubin, of Bagnolet, France. The other plate represents a group of hybrid Hellebores.

GARTEN-ZEITUNG (Feb.) gives a coloured figure of *Passiflora hybrida floribunda*, Haage et Schmidt, a cross between *P. Loudoni* and *P. princeps coccinea*, with three-lobed leaves, and racemes of 10—12 coppery carmine flowers; the plate is suggestive of a badly coloured princeps.

REVUE DE L'HORTICULTURE BELGE ET ETRANGÈRE (Jan.—Feb.) contains a group of *Phlox decussata*, consisting of the following varieties:—*Marquise de Vogué*, white, with deep red eye and purple throat; *Châtiment*, crimson purple with violet throat; *P. Lierval*, rosy carmine, the segments edged with white; *Corsaire*, pale rose with vermilion throat; *M. Pauchier*, rosy lilac striped all over with lines of bright rose; *M. Queneson*, bright rose with very dark eye. They are all first class varieties.—Group of *Masdevallias* including, *Lindeni*, *Veitchiana*, *amabilis tineata*, and *tovarensis*.

BULLETIN D'ARBORICULTURE (Jan.—Feb.) issues plates of *Pear Fondante Thirriot*, a large pyriform fruit, greenish-yellow, nearly covered with brown dots, buttery, and having an agreeable perfumed flavour, said to be a pear of the first rank.—*Pear Forelle*, a well-known variety of German origin, brilliantly coloured, and of excellent quality.

JOURNAL DES ROSES (Feb.) portrays H.P. *Rose Madame Moreau*, a large full bright carmine variety, of vigorous growth, raised from seed by M. Moreau, an amateur cultivator, and sent out in 1864 by M. J. M. Gonod, of Monplaisir, Lyon.

It appears that the OLIVE TREE thrives and bears well in California, and that it is profitable to cultivate it. The trees begin to pay at three years, and when five years old will pay all expenses of tillage and harvesting with a surplus, while the sixth year the crop will pay for the land, the trees, and the tillage for the five years previous, and, with good care, the increase is larger from year to year for a century longer.

GARDEN GOSSIP.

WE hear that a SUPPLEMENTARY CARNATION AND PICOTEE SHOW, similar to that held at Oxford last year, is arranged to take place at Slough during the coming summer. Mr. Dodwell, with whom the idea originated, requests us to make the announcement, which we do most willingly, trusting that the matter will be taken up with spirit and carried to a successful issue. The following circular, which will be issued in due course, further explains the character and object of the gathering:—

"Dear Sir,—It has been suggested to me that as the Supplementary Exhibition of the National Carnation and Picotee Society, held in this city last year, was a mark of attention to myself, a similar Exhibition should this year be held on July 31st in the grounds of the Royal Nursery, Slough, as a recognition of the work and worth of Mr. Turner. The suggestion has been submitted to Mr. Turner, and I am happy to say accepted by him, and I have now therefore very respectfully to beg your aid and co-operation in making the meeting worthy of the place and the man. Thirty-four years since (1849) Mr. Turner commemorated his entrance into occupation of the Royal Nursery with the largest and finest display of Carnations and Picotees I had up to that time seen, besides providing funds for a competition, in which he took no part. In the next year, the first of the celebrated trial exhibitions (northern *versus* southern raised flowers), instituted to dispel the vain notion then promulgated that there was a cardinal difference in the flowers of north and south respectively, took place in the same grounds; and in the year thereafter (1851) the first exhibition of the National Carnation and Picotee Society itself. I aspire to make the proposed meeting worthy of its predecessors, and hope, though the competition be confined to Carnations and Picotees, the friends gathering together will not be limited to the growers and admirers of those flowers only, but will include the much larger number who have known, admired, and sympathised with Mr. Turner's work. A subscription list has been opened for the purpose of providing funds for the needful prizes, and any aid you may give will be gratefully appreciated. Begging an early reply, I am, Dear Sir, your faithful servant, E. S. DODWELL, Stanley Road, Oxford."

The following subscriptions have been already promised:—John T. D. Llewelyn, £5 5s.; C. Turner, £5 5s.; E. S. Dodwell, £5 5s.; J. Macintosh, £3 3s.; J. Douglas, £1 1s.; Shirley Hibberd, £1 1s.; Thomas Moore, £1 1s.; W. M. Hewitt, 10s. 6d.; S. Brown, 10s. 6d.

— **THE INTERNATIONAL HORTICULTURAL EXHIBITION AT ST. PETERSBURG** will be opened on May 17, and be continued till the 28th. Those who desire to exhibit must give notice of their intention to Dr. REGEL, at the Imperial Botanic Garden, St. Petersburg, on or before March 13. The Schedule of Prizes is very comprehensive, and extends to 182 classes, the prizes consisting of gold and silver medals. Copies may be had on application to the Foreign Secretary of the Royal Horticultural Society.

— **WE** are pleased to see that our friend Mr. J. Douglas, one of whose fine new Auriculas we figure in our present number, has been presented with a handsome marble time-piece and tazzas, on the occasion of his removal to

Mr. Whitbourn's new establishment at Great Gearies, Barking, by the teachers of the Congregational Sunday-school at Barking, of which he has been for some years Superintendent. The time-piece bore the following inscription:—"Presented to Mr. James Douglas by the teachers and friends connected with the Congregational Sunday-school, Barking, as a testimony of their appreciation of nineteen years faithful service as Teacher and Superintendent. January 26, 1883."

— **THOSE** charming little spring-blooming bulbs, the SCILLAS, can scarcely be overpraised. *Scilla sibirica* is admired and appreciated by everybody for its bright blue flowers. *S. bifolia* is almost equally popular, but effective as it is, the *S. bifolia maxima* may be noted as being immeasurably superior to the typical form, and well deserving its name, for the flowers are not only larger, but produced in far greater abundance, forming broad corymbs rather than racemes. *S. taurica* is another of the finest of the early-blooming species, surpassing the beautiful *S. sibirica*; the contrast of its red flower stalks with the intensely blue flowers is very fine, and being of taller growth than the others, the plant shows its flowers off to better advantage. It is one of the many choice gems grown by Mr. Ware at Tottenham.

— **THE CHOU DE RUSSIE**, sent out by Messrs. Carter & Co., has been very strongly commended. Nothing, it is said, belonging to the Brassica tribe is more useful, and nothing will compare with it for delicacy of flavour. It attains the size of an ordinary Savoy, is very solid and thick in texture. Its colour when cooked is very pleasing, best described as a sea-green. After being cut the stem produces in early spring an abundance of sprouts of exquisite flavour; it is also very hardy and ornamental, the leaves being cut and serrated in a most curious manner. It is a really good winter green.

— **IN** MESSRS. VEITCH'S COLLECTION OF PITCHER-PLANTS the first point which strikes the observer is the exceptional uniformity in their appearance, the whole of the plants seeming to have every leaf furnished with a healthy pitcher, so that, being suspended from the roof close together, the space below the baskets, from end to end of the house, is so densely crowded with pitchers as to form a complete thicket. There is not a plant stove that would not have additional interest thrown into it by the presence of a selection of the best *Nepenthes*. The erroneous idea that they are difficult to manage deters many people from growing them, yet any one who has a house or pit, with heat and atmospheric conditions such as will grow cucumbers well, need not fear as to their pitcher plants succeeding, as such warmth and moisture as are required by cucumbers are all that is needed, if also the roots are always kept moist. Beyond a thin shade when the sun is on them, they cannot have too much light. They produce their pitchers most freely when the heads of the plants are close to the roof.

— **OF** the noble *MAGNOLIA CAMPBELLII*, we learn from the *Revue Horticole* that there is a grand specimen at the Villa Franzosini Intra, on Lago Maggiore, which is every year covered with its magnificent rose-coloured flowers. It is also stated to have flowered in the nursery establishment of MM. Rovelli, at Pallanza.

— **THE** Maidenhair, *ADIANTUM CUNEATUM*, has long held the first place with the makers of bouquets, buttonhole flowers, and most other combinations of a like description. The *Gardeners' Chronicle* tells us, that any one who has had an opportunity of seeing how the Adiantum which the London street vendors of buttonhole flowers use, stands when exposed to the cold cutting winter winds, or the flagging effect of the summer sun, will at once notice the difference between the same kind of Fern, when grown with the especial object of enabling it to keep fresh when subjected to the most trying conditions, as compared with what it is when ordinarily treated. There are several matters connected with the cultivation of Ferns for cutting, which the growers for the London market studiously follow. In place of cultivating them in over-darkened houses with too much moisture, they are kept from the first in structures as light as it is possible to make them, and the even more important condition of being stood close to the glass is attended to. Another essential is that the plants should not be in too vigorous a state; to avoid this the soil, whether the plants are large or small, should be completely filled with a mass of roots, added to this the fronds must be fully matured. It is only when the whole of these conditions are present whilst growing, that Ferns possess, to the full extent, the substance in their fronds requisite to enable them to stand as they should when cut. After cutting, before being used, they should always be immersed completely overhead in water for several hours; the moisture they thus absorb keeps them fresh much longer than they would remain without being so treated.

— **THE** modern *BEGONIA MADAME FANNY GIRON*, which is of the same habit as *B. insignis*, but a much more profuse flowerer, is spoken of as being a gem of the first water, and perhaps unequalled by anything as a table or room plant for winter use. The flowers are of a deep shade of scarlet, changing to pink, and the plant comes into flower in the early part of the winter. In forming a group of low-flowering plants, a row of this bushy drooping-habited Begonia, leaning a little forward, would make a background that would be simply incomparable.

— **ONE** of the pests of COOL ORCHIDS, indeed it has been called the greatest pest, is a small BLACK SLUG, of which Mr. Williams remarks that it takes up its home in the moss and about the plants, and often eats away the young flower spikes when they first appear. These slugs should be sought after night and morning, as it is at those periods that they do the mischief. They seem to enjoy the temperature of the cool Orchid houses. He tells us that the method he adopts for catching them is to look the moss carefully over as soon as the spikes first appear, so as to be sure there are no slugs secreted among it; then to place a wire round the pot, and suspend it from the roof. This is done when they are young, which is the favourite time for these marauders to attack them, and in this manner the flower spikes are made secure.

— **THE** Cambridge Botanic Garden possesses in *NYMPHÆA CANDIDISSIMA*, a magnificent hardy water lily. The flowers sent last year to the *Gardeners' Chronicle*, by Mr. Lynch, the Curator, measured 16—18 inches in diameter when expanded, and were similar to those of *N. alba*, but larger and clearer in colour. The plant is said to grow under

the same conditions as *N. alba*, and to have been in bloom all the summer.

— **THERE** are now many strains of STRIPED PETUNIAS, but *Veitch's Superb Striped* is one of the best. It has been carefully selected for many years and is very constant, producing beautifully striped and spotted flowers of the usual colour—not all, be it noted, regularly marked. It has the merit, too, of not being over large, but moderate in size, and in consequence the more effective and more continuous-flowering.

— **THE** *JASMINUM GRACILLIMUM*, says the *Gardeners' Chronicle*, is incomparable both as regards its chaste beauty and charming fragrance. No plant of modern introduction can beat all compared with it; it is even more beautiful than the Gardenia, which loses its purity of colour in a short time, and is not so pleasantly fragrant. Grown as a bush for the warm greenhouse or conservatory it will always be admired, but it is as a cut flower that ladies will cherish it most. Gardeners who toil year after year to have sweet-scented flowers in winter, and seldom succeed, either for want of means or proper material, should turn their attention to the cultivation of this plant, than which there is nothing more beautiful among all the beautiful exotics that we possess.

In Memoriam.

— **MR.** WILLIAM HORSEFIELD died at Whitefield, Lancashire, on January 17, aged 67 years. He was for many years President of the Prestwich Botanical Society, and well known in the neighbourhood as an excellent practical botanist.

— **MR.** MICHAEL ROCHFORD, of Page Green, Tottenham, died recently, in his 65th year. Mr. Rochford was greatly respected amongst the London market gardeners, in which business he had been long engaged. He was originally connected with a private establishment, having been associated with the garden of Lord Faversham at Oak Hill, East Barnet, which was famous for the magnificent Grapes, Pines, and other fruit, which for a lengthened time held a leading place at the great London exhibitions. Mr. Rochford for some years had the Oak Hill Garden on his own account, and there grew for market; after which he purchased the land at Page Green, which he has covered with extensive glass erections devoted to Grape and plant growing. He is said to have been the first to try the system of glazing which dispenses with the use of top putty, except for bedding in the glass, now so generally adopted by the market gardeners.

— **MR.** WILLIAM MILES, of the West Brighton Nurseries, Cliftonville, Sussex, died on February 4, aged 49 years. He was born at Ashstead, Surrey, and in early life served under the late Sir Joseph Paxton. He was a man of great energy, and by dint of skill and perseverance had established for himself a good business in West Brighton.

— **MR.** THOMAS SNELLING, gardener to the Hon. Society of the Middle Temple, in which post he succeeded the late Mr. Dale, in 1879, died suddenly on February 20.



RHODODENDRON CETYWAYO.

[PLATE 585.]

OF the value of the Hardy Rhododendron as a decorative flowering shrub, and as an evergreen, we have so often spoken, that we need not stay to discuss the question now. The facts are admitted on all hands. But what constitutes a hardy Rhododendron of the fine foliaged group? for there are sorts which have bold and handsome foliage, and sorts which have it not, and the great superiority of the former over the latter is seen at a glance. Well, then, what we seek is not one of those kinds in which the blood of *R. arboreum* preponderates, though that has been usefully infused in past generations to impart colour. Nor is it one of the sorts in which the blood of *R. ponticum* predominates, for these, though fairly hardy in ordinary seasons, have their flower-buds destroyed in very severe winters, and at best are not very effective as evergreens. We must look further for what we are seeking, and we shall find it in the race in which the blood of *R. catawbiense* predominates: in those varieties which have been bred from the catawbiense type. Here we get practically the highest degree of hardiness to which the Rhododen-

dron attains, and we get with it trusses of majestic flowers, backed up by noble foliage. This lesson at least we have learnt from the many annual pilgrimages we have made to the Knap Hill Nursery of Mr. Anthony Waterer, to whom our thanks are due for the materials whence our drawing of the striking variety we now figure was derived.

Rhododendron Cetywayo is the darkest-coloured variety which is known, but though deep it is not dull in colour, but rather has a richness of hue which with its yellow spotting lights up the flower in a very effective way. The tint is almost indescribable—a deep blackish-purple with a slight suffused bronzy hue, the upper segments spotted with dull golden yellow. This difficult colour has been very well brought out both by Mr. Fitch and Mr. Stroobant, so that our figure gives, as it should do, a good idea of the character of the flower, a point not however always attainable owing to the paucity of available pigments. It will be seen that Cetywayo is one of the sorts with bold and effective leaves, which are unaffected by the winter's frosts, and therefore forms a good evergreen.—T. MOORE.

TOBACCO VAPOUR AS AN INSECTICIDE.

MGODEFROY-LEBEUF, in his interesting publication *L'Orchidophile* (p. 520), points out how to make an end of insects in orchid-houses. The method, he tells us, was discovered by M. Boizard, gardener to Madame de Rothschild, who not being able to fumigate with tobacco on account of the smell which it leaves behind, formed the idea of employing tobacco juice in the state of vapour. The manner of applying the remedy is thus described:—

A litre (nearly a quart) of tobacco juice as supplied by the manufacturers is placed in a stew-pan, and made to evaporate in the house containing the plants. A thick gluey matter, the residue of the tobacco juice, remains at the bottom of the pan, and the operation may be carried further by putting about a quart of water to this, and causing it likewise to evaporate. The operation finished, if one passes the tongue over the surface of a leaf, there is sufficient evidence of the results, as all parts

of the plants, and the pots, shelves, and glass, are found to be impregnated with condensed nicotine vapour, the presence of which is quite evidently revealed to the taste.

The most delicate plants, which are very sensible to the effects of smoke, suffer in nowise from this system; the flowers do not become stained or spotted, and besides a light odour which promptly disappears, nothing in the house would reveal that such a slaughter of disagreeable hosts has taken place. The thrips lie about profusely, the lice are on their backs, the scales themselves come off easily; even the caterpillars in cold houses perish.

The operation has of course to be repeated, for there are always some eggs near the point of hatching, or some old poachers which have plunged into the deepest part of their retreats when they have perceived the odour of the vapour. Generally, however, the insects die where they are found. These repetitions, if one is prudent, should take place each week.

It will suffice to vapourise a litre (quart) of tobacco juice in a house representing 100 cubic metres (about 333 $\frac{1}{3}$ ft. cubic), in order to dispense with fumigations, and the use of insecticides, which latter are often as dangerous for the plants as for the insects; nor will it be necessary to cause the plants to be washed, an operation which is both costly and risky, and during which so many flowers, leaves, or shoots are broken. Try M. Boizard's system, says M. Godefroy, and you will see all your insects disappear. "I have, in a house 33 $\frac{1}{3}$ ft. long, 10 ft. broad, upwards of 1,000 plants, many of recent introduction. I was previously obliged to employ a woman constantly, and could not struggle against insect invasion. Now, I have not a single insect. I ought to say that I did not expect them to have revealed their presence. It is better to prevent the evil than to cure it; therefore each week the chafing-dish is put in requisition, half a litre of tobacco juice is put in the stew-pan, and one rests quietly."

M. Boizard deserves our thanks for having made known to us a method which with a little attention will put us under protection from the ravages of these infinitely small but troublesome creatures.—GODEFROY.

OURISIA COCCINEA.

IN this we have an exceedingly pretty creeping hardy herbaceous plant, well worthy of a place in every garden. It is easily managed, and succeeds well in rather a damp and shaded place. The flowers grow on an upright stem about a foot high, and are tubular with a spreading limb, and of a bright scarlet colour, resembling *Salvia splendens*. It is well adapted for making up bouquets.—JOHN WEBSTER, *Gordon Castle*.

STANDARD CURRANT TREES.

I HAVE often wondered that the cultivation of our native fruits should be so much neglected as it has hitherto been; but now we see in regard to the Strawberry crop that the farmer is taking lessons from the gardener, and has got himself a copper kettle to preserve his fruit after it has ripened, so as to get a perishable article conveyed to a distant market. The Raspberry crop will come in for better means of carrying than the

present scheme of a cabbage leaf; there is plenty of room for improvement on that score, for some that came to me in a basket by rail were badly bruised by shaking on the way. The Red Currant carries well if well packed, and gently handled; and the White Currant if richly fed will rival the grape in size and clearness, and when grown like standard roses breast high I know of few things that look better in the way of ornamental plants.

The Currants, Red and White, grow so freely, that a row of standards can very soon be got



STANDARD CURRANT TREE.

up, and the same may be said of Gooseberries and Black Currants. Dissimilar in character and habit though they be, in rapidity of growth they are as one. I once resolved on giving a small Currant garden a large share of manure that I was glad to get buried, and the result was that the bushes shot up in growth and fruited as I had never seen them do before. There are some old trees in gardens that have borne heavy crops for 20 or 30 years, and although they have been cleared yearly of all their young wood, they heed it not. The Currant may indeed be trimmed just as Crawshay trimmed his Vines, to clean stems like walking sticks, and these in his master hands yet did well. There are plenty of Standard Currants in the garden at Worsley Hall in good condition.

Standards like these facilitate syringing with medicated water, and allow birds to catch the grubs; and when the season for picking the fruit comes round, it can be done with less exertion than from low bushes, on bended knees.—ALEX. FORSYTH.

* * The same remarks apply equally, if not more strongly, to the Gooseberry tree, especially to those varieties, like the Warrington, which are of drooping habit. We add an



STANDARD GOOSEBERRY TREE.

illustration of a Gooseberry tree trained standard fashion.—ED.

THE RHODODENDRON.

IN the FLORIST for the year 1857, at p. 247, a correspondent (Rusticus) asked, "Why are not American plants more generally grown?" and he explained that his question referred only to Rhododendrons, and of those only to two species and their varieties, viz., *R. ponticum* and *R. catawbiense*. A quarter of a century has passed away, and the question is still unanswered. Year after year the praises of the Rhododendron for its gorgeous beauty and magnificence, and its usefulness as a hardy flowering shrub, are repeated, and still it is not generally planted, or seen

growing in every "wood, plantation, and shrubbery in the three kingdoms," as Rusticus desired.

The Rhododendron never can be a plant for the million; its slow growth, and the expense of its propagation, will always make it, comparatively speaking, a dear plant. The question of soil will also prevent it from being generally grown. It is a well known fact that it will grow well in other than peat soil, yet it is difficult to persuade intending planters to try it without. Situation has also much to do with the more general non-planting of Rhododendrons, for success depends almost as much on the situation as on the soil. Whatever may be said to the contrary, shelter and humidity are as necessary to the well-being of the Rhododendron as peat soil. If planted in peat soil they make a more vigorous growth, and assume a better colour, than they do in loam, or in loam and leaf-mould; but it is understood that they will set their bloom better in the latter.

It must not be inferred from the foregoing remarks that Rhododendrons like wet ground to grow in, as nothing will so soon put them out of health as an excess of moisture at the root; and hence it is necessary in preparing a bed or border for them to provide the means of carrying off any superabundant moisture. This is especially needful where the bed is being filled with peat soil, in a naturally retentive piece of ground, for otherwise, in such a case, the peat becomes little else than a sponge, absorbing the surrounding moisture.

The Rhododendron is not only one of the most useful of hardy shrubs for the embellishment of the "shrubbery, plantation, and wood"; it is also a very desirable shrub, in a forced state, for the decoration of the conservatory. With a small amount of care, and but little forcing, Rhododendrons may be had in flower from Christmas, until they are in bloom out of doors. Any of the varieties may be forced, but some are from their earliness more suited for that purpose than others. Rhododendrons intended for forcing should be potted as early as possible in the autumn months. When potted they should be placed in a cold pit or frame, so that they may make root previous to their introduction into heat; and as soon as the blooms begin to expand

they should, if possible, be removed into an intermediate house while the flowers become fully expanded. By this means the flowers will remain longer in perfection than if allowed to open fully in the forcing house.

Though Rhododendrons are still used but sparingly in the many positions for which they are so admirably adapted, there has been no lack of industry and enthusiasm on the part of the few who make a specialty of their cultivation; and while they have vastly improved the shape, colour, and substance of the flower, they have not been forgetful of the habit and constitution of the plant, which is now such as to entitle many of the varieties to be classed as the finest of hardy shrubs. Some selections of these are appended.—G. THOMSON, *Knap Hill, Surrey.*

A SELECT LIST OF RHODODENDRONS

which are never known to suffer from the severity of the weather:—

Alexander Dancer.	Lady Annette de Trafford.
Atrosanguineum.	Lady Eleanor Cathcart.
Beauty of Surrey.	Lady Clermont.
Caractacus.	Madame Cavalho.
Charles Bagley.	Marchioness of Lansdowne.
Charles Dickens.	Minnie.
Coriaceum.	Mrs. Frederick Hankey.
Delicatissimum.	Mrs. Harry Ingersoll.
Delicatum.	Mrs. John Clutton.
Everestianum.	Mrs. Mendel.
Fair Helen.	Mrs. Milner.
Fastuosum flore-pleno.	Mrs. R. S. Holford.
Giganteum.	Mrs. Shuttleworth.
Guido.	Old Port.
H. II. Hunnewell.	Ralph Sanders.
H. W. Sargent.	Sappho.
James Bateman.	Scipio.
James M'Intosh.	Sigismund Rucker.
James Marshall Brooks.	Silvio.
John Spencer.	Sir Thos. Sebright.
John Walter.	The Warrior.
Kate Waterer.	Vauban.
Kettledrum.	
Lady Armstrong.	

OTHER GOOD RHODODENDRONS,

but which at times are more or less injured by frost:—

Concessum.	Princess Mary of Cambridge.
Crown Prince.	Purity.
Duchess of Bedford.	Salvini.
Earl of Shannon.	Sappho.
Frederick Waterer.	Snowflake.
John Waterer.	Stella.
Lady Tankerville.	Sylph.
Lady Winifred Herbert.	The Maroon.
Mrs. Charles Thorold.	The Queen.
Mrs. John Penn.	Titian.
Michael Waterer.	Vandycke.
Mrs. William Bovill.	William Austin.
Nero.	W. E. Gladstone.
Perfection.	
Picturatum.	

EARLY OR FREE-FLOWERING RHODODENDRONS suitable for forcing:—

Auguste Van Gcert.	Michael Waterer.
Beauty of Surrey.	Miss Owen.
Blandyanum.	Mrs. Shuttleworth.
Brayanum.	Mrs. Fitzgerald.
Broughtonii.	Mrs. John Penn.
Cardinalis.	Mrs. John Waterer.
Caucasicum pictum.	Marchioness of Lansdowne.
Cynthia.	Purity.
Duchess of Bedford.	Princess Mary of Cambridge.
Everestianum.	Prince Camille de Rohan.
Fastuosum flore-pleno.	Sappho.
Grand Arab or Vesuvius.	Sir Robert Peel.
Glennyanum.	Salmonium roseum.
Hendersoni.	Titian.
Iago.	Varium.
Jacksoni.	Victoria.
John Waterer.	Verschaffeltii.
Kate Waterer.	
Lady Armstrong.	
Limbatum.	

MAIZE TO MATURITY

IN AN ENGLISH GARDEN.

A SUFFICIENTLY brief and expressive heading for the contents of this paper does not readily occur to me.

I cannot write of Maize as a "florist flower," for being an apetalous plant, there is no laying hold of such a blossom except botanically. Neither is it any manner of "pome," that it should find a place in the fruit department of the *FLORIST AND POMOLOGIST*. I am not here advocating its culture as a decorative plant, or as a competitor of the higher vegetables of the kitchen garden, or as a fodder for the beasts. But I would speak of it as a plant acutely responsive to the interesting process by which florist flowers and cultured fruits are improved.

Most plants are grown for the beauty or curiousness of their flowers or foliage; but here is one that possesses great variety, and charms of a lasting nature, in its ripened heads of seed, which when preserved in their loosened leafy envelopes are much prettier than if stripped and stiff, as we are wont to see them when imported. I have grown ears perfectly filled, and perfectly ripened; and those that grew twenty seasons since are as fresh in colour as those that ripened but last summer.

As briefly as I may, I will describe the round of culture that has succeeded in by no means the kindest climate of England, and will state some of the results of crossing varieties that differ in form and colour of the grain

Many of my specimens were ripened (notably in 1868) in the open air, under a south wall of brick; but in this locality, where the apricot remains an unblushing wooden delusion to the last, and peaches are not to be expected on an open wall, I have of late years grown Maize after the tulips in the tulip-house, an unheated airy structure, containing beds of 48 feet long, with the glass down to the ground.

It counts as a comparative failure with me to get the ears no nearer maturity than the cooking stage; though an unholy joy pervades the household when the Maize is smitten just in time to be a delicious vegetable.

However, with the exception of the wretched 1860, I do not remember a year of abject failure, although I have in several seasons seen with sorrow my favourites come to a culinary end, in the feeble company of the last French beans and latest mildewy peas.

The first essential point in growing Maize in English gardens is to catch the season; and the second is, to keep with it.

The way is lost at the outset unless the seed be sown in due time, and in heat; and the season is never overtaken again if the young plants suffer a check after they are planted out, either from cold or from injury to the foliage by snails or high winds.

A safe time to sow the seed lies between the last week in March and the first in April. If sown too early the plants may require more house and pot room than can be accorded them; and if they become pot-bound or drawn for lack of light and air, they will run prematurely into straw, and make poor lean spectacles of themselves. All the lowest rings or joints afterwards produce the most vigorous roots, and these joints cannot be too short and stout.

The seed germinates most freely when fresh, but I have found it age quickly, and when three or four years old refuse to grow. I am speaking of home-grown corn; but even in America, care is taken that the seed is "full of germ."

A very moderate bottom heat is sufficient at first, and need not be continued when the plants are up. They will enjoy a temperature of 65° with 10° more by sun heat, and a night

temperature of 55°, with air on all safe occasions. They grow fast, and by the middle of April should be sturdy little plants with four or five leaves, if sown in March.

They require growing with as short and "stocky" a habit as possible, by means of light and air and moderate warmth; and towards the latter part of May they must be most judiciously hardened off. It will not be safe to plant them in the open air till about the 10th of June, by which time they should be strong plants with 8 or 10 leaves, and be allowed to stand a yard apart.

The four great events in the life of this stately cereal, under English culture, are: the sowing, the planting out, the blooming, and the ripening. To keep fully up with the season there should be an interval of eight weeks between each of those stages. The plants cannot, however, be too early in bloom, so long as they have not been hurried beyond their strength. From the middle of July to the middle of August is the safest flowering period. I have never had those very strong that bloomed earlier, nor well ripened that were later. Maize loves a deep strong rich soil, with abundance of moisture, though well drained. When the plants are strong, they will throw up side stems that had better be removed, for they will only make late unshapely heads, often combining the different formation of the male and female ears.

All the lower joints as they are developed must be thoroughly well earthed up, to encourage the different circles of vigorous main roots, of which the viscid mouths, if they are kept waiting, will be seen to literally water for the taste of fat earths.

All through July the progress should be most rapid, and in the third week the plants will be distributing their broad foliage, in lengths, upon the ascending stem—the blossom-head carried up gracefully to the top.

The flowers of Maize are not hermaphrodite, as in our own more lowly cereals; nor are the sexes borne on different plants, as, for instance, in the case of hemp. Maize is monœcious, bearing its stamens and pistils, its flowers and seeds, in ears differing widely in position and character. This is a most convenient formation for hybridising purposes, since the cultivator can so easily secure the purity of any

cross fertilisation he may wish to effect. The stamens have an ear entirely to themselves in that drooping plume that crowns the plant. They are so many happily contrived little sacks, hanging airily out of the branching ear, each by a slender filament, stirred by a breath that would not wake an aspen leaf, and with little mouths that open downwards, and discharge their golden shower in the sun. There is never any wilful waste. In wild wet weather, when the pistils would only be unfit, and clogged by a yellow paste, the little mouths are tightly shut, and the pollen being within the stamens, and not damageable outside, it is kept always perfectly dry.

The corn-ears are formed at the side of the main stalk, springing alternately from the axils of the broadest foliage. The stalk at the joints they come from is cunningly grooved, so that the young ear in its envelopes lies nestled in this cradle till the time for it to emerge. Past these the stalk runs up much lighter, with only the slender burden of the blossom-head.

The strongest corn ear is always nearest to the male head, and furthest from the ground, and in this country seldom more than two ears will fill with corn and ripen.

From the sheaths of the corn ear appear at blooming time the pistils, that form a long green or ruddy-tinted tassel of silky filaments, one attached to each ovary in the female head that is awaiting the next stage of its development by pollen grains striking somewhere along the course of each silken thread.

The pistils will grow to a great length if kept waiting for the pollen, as if to increase their chances of meeting with it; but their growth ceases and they wither in a few hours when impregnated.

Upon timely management when the plants are in bloom depends that all-important point the fulness of the ears. Of course, where countless numbers can be grown, in anything like a "patch of Maize," in a proper climate, nature will accomplish her object perfectly. Whatever be the wind that blows, the fertilising showers of golden dust will be wafted or driven through the skeins of expectant pistils in one direction or another.

I may just note in passing that a plant of Maize is generally not self-fertilised. Its own

pollen is blown to the stigmas of some other, and its own pistils are fertilised by pollen from some neighbouring plant; while the very position of the corn ears, directly under their own broad leaves, shelters them very much from the action of their own pollen.

Therefore, with our mere handful of plants we must supply the conditions of full fertility by preserving the pollen from waste, and by applying it to the pistils. If the plants are in the open air, the best way to secure it is to tie the flowering heads up in a light tissue paper bag when they are seen to be in bloom. There is a fresh pollen supply every warm or sunny morning, but not much in the afternoon. The bags should be put on by 10 A.M., and taken off about noon. The pollen is so abundant that it can be measured by the teaspoonful from every two or three heads daily. It should be immediately sprinkled among the pistils from day to day, until they cease growing and there are none left unwithered. The ear will then begin to swell rapidly, and be as full of corn as any picked specimen brought over from "the States." With me, a hundred plants are nearly a month in passing the blooming period, but this is mainly due to their being crosses between different varieties of earlier or later maturity. One pure variety would probably bloom more conveniently, and no doubt in large crops this must be an important point.

When the ears are full, they will be standing boldly out from the plant like huge pods, and will remain for a few weeks apparently at a standstill. Out of doors they may be left until the October frosts destroy the foliage. It is not likely that they will get over ripe, or that any part beyond the ears will come to look ripe at all. If grown under glass it should be in nothing less free to light and air than an unheated orchard-house, protection being grateful only in wild weather, at blooming time, and in the later autumn. Of course under these advantages there may be obtained a more bountiful and beautiful harvest.

In all but the stout green stem, the plants will acquire the strong autumnal tints of russet and yellow in which the foliage naturally ripens. The heavy ears will drop at the neck and hang fruitfully down in their pale gold sheaths, with their silken threads a rich nut brown, and the flowering ears will have changed to the familiar yellow of our own oat

fields at harvest-time. But, however ripe and dry the corn ears may appear when cut, they will require several weeks of careful drying, the stalks and "cob," or central pith, round

which the grains are set, contain so much moisture. If put away too soon, the leafy sheaf will mildew and the whole head decay. —F. D. HORNER, *Kirkby Malzeard, Ripon.*



HYMENOCALLIS SPECIOSA.

THIS is a West Indian species, known also under the synonymous name of *Pancratium speciosum*. It is comparatively little grown, yet now when bulbous plants of the class to which it belongs are being more looked up than in times past, it is not unlikely that this fine kind may meet with more attention. It is of moderately strong growth, with stoutish bright green leaves, narrow and channelled at the base, much broader above, somewhat abruptly tapering, but pointed at the extremities. The bulbs, when strong and well grown, are large, tapering up to the crown, from whence the leaves spring.

The plant is a free grower, but requires a brisk heat to do it well; it will bear as much as the well-known *Eucharis amazonica*, and its leaves will stand much more sun than those of the *Eucharis* are usually found to do with. With me it used to flower about July or August, but like many others of the allied species I have no doubt the time of its blooming will vary with the way in which it is treated in respect to warmth and other matters. I found it slow to increase, occasionally producing off-sets, which, when about a year old, may be removed from the parent plant and potted singly. This should be done just before they are started into growth. Fairly holding soil suits them, but it must not be of too heavy a nature; nor should too

large pots be used in the first instance, the plants being kept rather under than overdone in this respect until they get to thriving freely, after which they must not be stinted for root-room, as most of this section of Amaryllids require comparatively more space for their roots than do the ordinary varieties of Amaryllis.

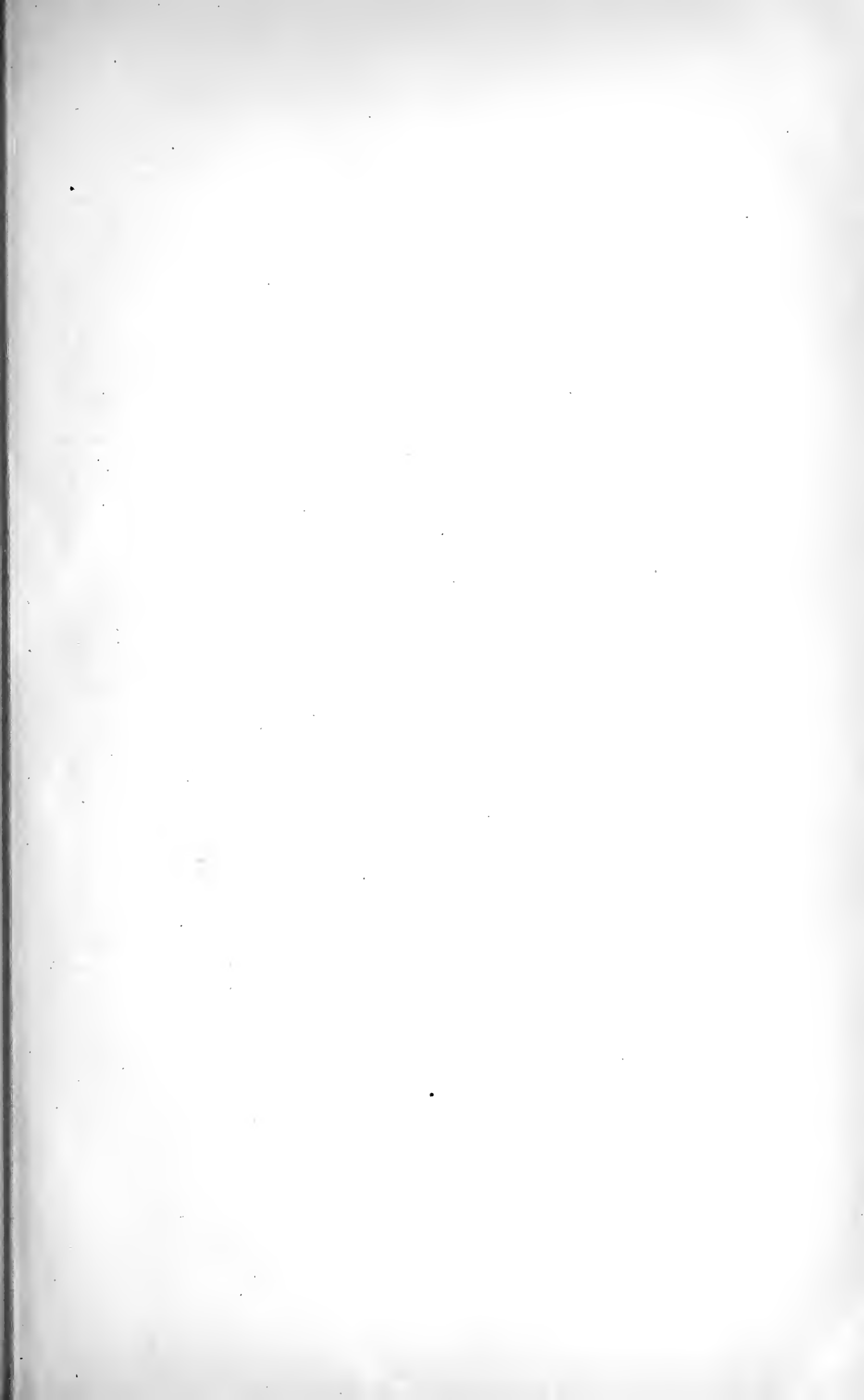
After flowering it makes growth, and should be liberally treated to heat and sufficiently supplied with moisture until the growth is finished up, which will be towards the end of October. During this time the plants should be stood well up to the light, otherwise the leaves get drawn and are soft and weak, a condition not conducive to blooming freely. Through the winter keep them much drier, but do not let the soil become quite so dry as in the case of Amaryllis. In the spring again give water, and treat to heat and light as when growing the previous season. When the flower stems appear let the plants have as much air as the other occupants of the house will bear, for with this, as with most other subjects of a like nature, the true character of the flowers is best brought out by treatment that is calculated to give strength and substance. All that is further required is to give increased pot room as the bulbs increase in size, and to see that the foliage is never allowed to suffer by insects, such as red spider or thrips, which do much harm in very little time. —T. BAINES, *Southgate.*

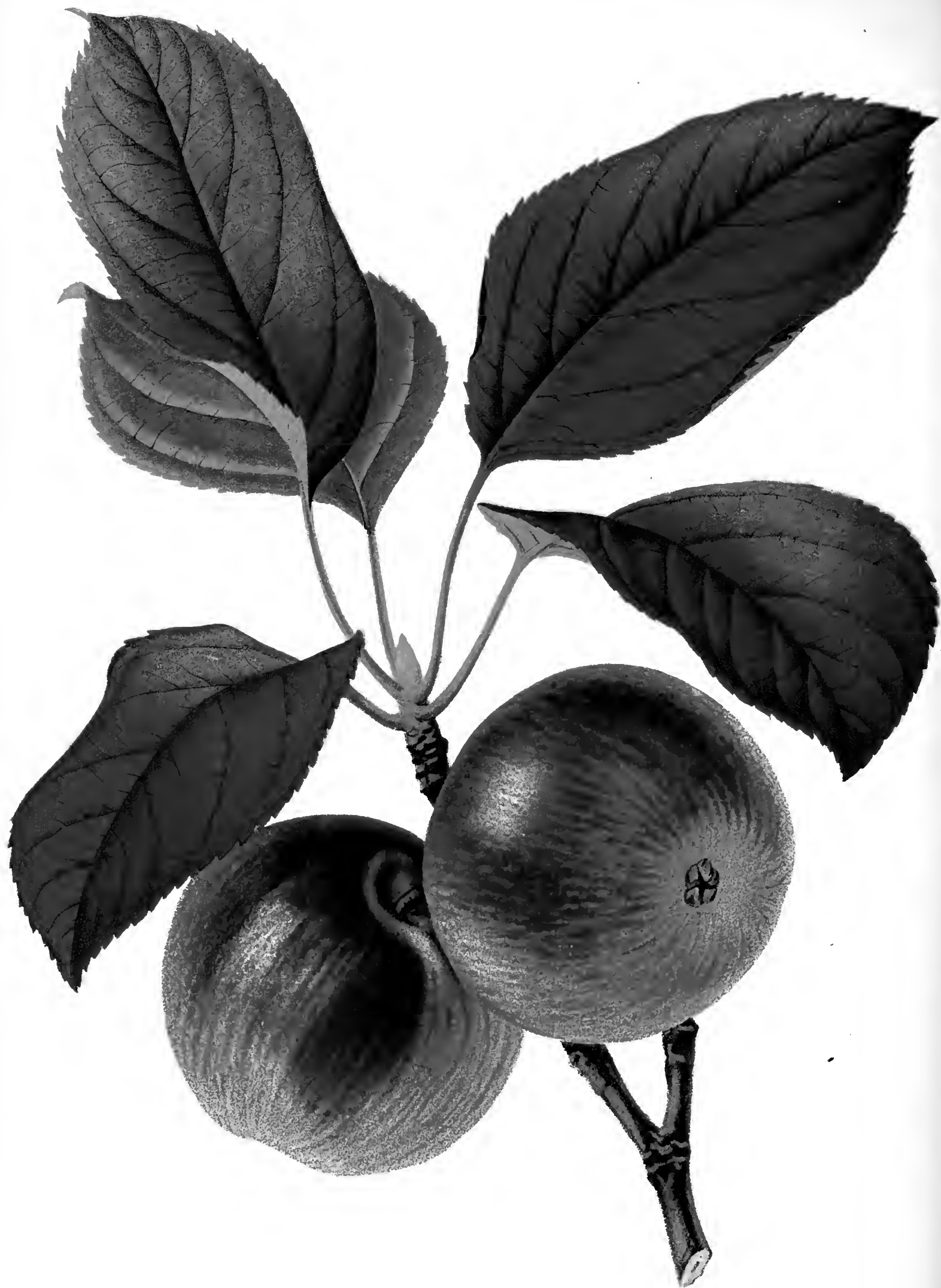
IMPATIENS ROYLEI AS A BEE PLANT.

IT may interest apiarians to know something of a plant, easily obtained and easily cultivated, that will supply their bees with a large quantity of honey at a season when honey-yielding flowers are getting scarce. This plant is no other than the Giant Balsam, *Impatiens Roylei* of Walpers, better known under the previously occupied name of *I. glandulifera*, Royle—not “*glanduligera*,” as commonly written. It is an old inhabitant of our gardens, having been introduced from North India by Dr. Royle about forty years ago; and in neglected gardens or undisturbed ground it will reproduce itself year after year. Like the majority of its congeners, it is an annual, and a robust one it is, often growing to a height of 8 or 10 feet, or even higher, and having stout, fleshy, brittle, hollow stems. In the garden of the Horticultural Society at Chiswick, whither it was sent by Dr. Royle in 1839, it attained upwards of 12 feet in height by the end of August, although the seed was not sown before the end of May. This was probably under glass. A figure of it was published in the *Botanical Register* for 1840 (t. 22), where Dr. Lindley says that it is one of the most beautiful plants that can be looked upon, flowering freely all the autumn. In the *Botanical Magazine* for 1843 is a figure (t. 4020) of a variety having flowers of a richer, darker purple. Its hardiness and beauty were then fully recognised. Sir William Hooker wrote:—“Notwithstanding the peculiarity of climate which prevails in the hill country of India, where this plant is a native, almost all seasons in this country seem to be favourable to its growth; for, though a moist atmosphere singularly favours the rapid growth of this plant, yet dry as was the summer of last year, in my own garden it came to great perfection. And this summer there is a most abundant crop of self-sown plants, which only require to be thinned out, and thus an annual supply may, without difficulty, be kept up. In the earlier stage of the plant its coarse dark foliage is unpromising, but when the copious flowers come to perfection it will be seen that few annuals are better worthy of a place in every good-sized flower garden. The flowers are in the greatest perfection in autumn.”

The species as limited in Hooker's *Flora of British India* (i., 468) exhibits considerable variation in the form, size, and disposition of the leaves, as well as in the colour of the flowers. Thus *I. candida*, Lindley (*Botanical Register*, 1841, t. 20), is regarded as a variety; this has narrow leaves thickly studded on the margin with crimson teeth, and nearly wholly white flowers. Another variety is the *I. macrochila*, Lindley (*Botanical Register*, 1840, t. 8), which has brighter rosy-purple flowers, and the uppermost leaves at least are alternate. Without intermediate forms these would certainly be regarded as species; but whether we regard them as varieties or closely allied species is of little consequence. They all inhabit the same region in the North-Western Himalaya, from Nipal to Marri, at altitudes from 6,000—8,000 feet, and they all have the same robust habit, and probably, though by no means certainly, possess the same honey-yielding properties. *I. moschata*, Edgeworth, is also referred to this species, though the author considered that it differed specifically in its musky odour, habit, and more deeply serrated leaves.

With regard to the value of *Impatiens Roylei* as a honey-yielding plant, we are indebted to a report by Dr. Münter, Director of the Botanic Garden of Greifswald, in the *Garten-Zeitung* [1882, 531]. It appears that it was exhibited at an exhibition of a society for the promotion of bee culture held at Potsdam, as a bee-feeding plant, and its qualities were so highly praised that a gentleman named Von Behr determined to try it on the Baltic coast at Greifswald. The seed was sown in September, 1881, in drills $1\frac{1}{2}$ to 2 inches deep and about 4 inches apart, and as a matter of precaution a light covering was placed over the bed during the winter. In the spring, when the seedlings had reached the height of about 2 inches, a few were transplanted as near as possible to the bee-hives, at 2 to 3 feet apart. As early as the latter part of July the first flowers appeared, when the plants were 4 to 5 feet high. Subsequently the plants grew most vigorously, so that by the beginning of September they were from 6 to 8 feet high, abundantly branched, and covered with flowers. On September 3 Dr. Münter, accompanied by Dr. Goeze, went to Mr. Von Behr's garden for





Apple la Fameuse.

the purpose of seeing the bees visit the flowers. It was a still day, with bright sunshine, and Dr. Münter reports that the bees appeared in such numbers as to enable one to say, without fear of exaggeration, that there must have been a bee in each of the many thousands of flowers, and the arriving bees could find no flowers to visit.

Perhaps some readers may feel disposed to try the Giant Balsam for the same purpose, for little is yet known of the quantity and quality of the honey it yields. It is a plant that still lingers in some gardens in this country; I myself saw it in several gardens in Chiswick last autumn. In conclusion I may add that it has large broad seeds that are said to be eatable raw, tasting like nuts.—W. B. HEMSLEY (*Gardeners' Chronicle*).

LONICERA SEMPERFLORENS MINOR.

WHEN some three or four years ago, in company with the late Mr. Arthur Veitch, I paid a visit to the gardens at Kew, we were much struck with the rich inflorescence of this graceful climber, as trained and grown near the glass in one of the temperate houses. Although every gardener is well acquainted with the old scarlet Trumpet Honeysuckle, but few I imagine are aware of the value of this particular variety for training up pillars, or covering trellises in the greenhouse, where, as its name correctly implies, it is always in flower. My lamented friend at once made a note in his pocket-book. I lost no time in procuring two plants, which I planted out and trained under the north roof of a small plant house, and although the space they now cover does not exceed twelve feet by six, we are never without an abundance of flowers throughout the winter. At the present time the young growths are pushing along vigorously, and the whole of the roof is becoming one mass of buds and flowers, set off by good foliage, which, by the way, is not subject to the attacks of insects—a very important factor, which should not be lost sight of in the selection of climbers for growing in a mixed collection of plants where fumigating is often disagreeable or injurious.

Half ripened pieces of wood taken off with a heel strike root freely when placed in gentle

bottom heat and covered with a bell glass. When fairly rooted and potted off they require close treatment for a time; but being nearly hardy this should not be continued longer than is absolutely necessary, neither should they be overpotted. The plant is by no means particular as to soil, provided it is well drained, and liberally supplied with water throughout the growing season. My plants are growing in a mixture of turfy loam, peat, and coarse sand, and a few lumps of old cow manure are occasionally placed on the surface.—W. COLEMAN, *Eastnor Castle Gardens*.

APPLE LA FAMEUSE.

PLATE 586.]

ASINGULARLY pretty Apple, and withal a very good dessert fruit, which bears the synonymous names of Snow Apple, Pomme de Neige, and Pomme Luiken. It is not a new variety, having been grown in this country for many years. It came originally from America, but succeeds so well in this country, and even in the north of Scotland, that we almost claim it as our own; besides which, we believe they have another Snow Apple in America.

The name “snow” one must suppose is applied to the pure white flesh, which is quite “as white as snow.” The skin is greenish white where it is shaded, but where exposed it is flushed with deep scarlet, and as delicately shaded as a peach, the outer surface thus contrasting admirably with the pure white of the flesh. It is somewhat soft in texture, tender, with a very sweet perfumed flavour. In size it is small; and in form roundish, with a flat base. The eye is small and closed, set in a very shallow basin, sometimes prominent, while the stalk is slender, three-fourths of an inch long, set in a shallow even basin, and altogether regularly formed.

The tree is a great and free bearer. The variety is one well worthy of cultivation. The fruit, which is in use during November and December, is a very beautiful object for the dessert table.—A. F. B.

VIBURNUM MACROCEPHALUM.

THIS plant, although not of very recent introduction, is nevertheless well worthy of being brought into more general cultivation than it now is. It belongs to the class of hardy shrubby greenhouse plants, and is therefore not by any means difficult

to manage and get into flower at this season, which is its natural blooming time. The principal treatment required is to grow it in strong or stiff loamy soil, for it is a gross feeding plant, giving it liberal pot-room, and placing it outdoors in the summer months, where it can get plenty of sun and air, in order to ripen the wood, and enable it to form its flower-buds, which are produced, as in most of its class, on the terminal eye or point of the current year's growth. Being of a deciduous character, it can be put away into any out-of-the-way corner as soon as the leaves are off, and remain there until the time required to start it into renewed growth.

The flower heads very much resemble, both in shape and colour, those of the old Gueldres-rose, *V. Opulus*, the hardy Snowball shrub, but they are three or four times the size, while the plant is of a dwarf compact habit, and well suited for grouping amongst other sorts in flower at this season in a conservatory or greenhouse.—JOHN WEBSTER, *Gordon Castle*.

THE BEST WALL ROSE.

IT may seem almost presumptuous to attempt to single out any one kind of Rose as the best for the clothing of dwelling and outhouses, and of walls. Such a Rose ought to be vigorous, hardy, and free-flowering, of pleasing colour, of fair form, and fragrant. Its leaves should also be large and semi-evergreen, and its constitution so strong as to give a long tenure of life to individual specimens, whether on its own roots or worked on other stocks.

Not a few of our best wall Roses lack durability, or floriferousness, or both. *Maréchal Neil*, for example, possesses most of the qualities of a first-class wall Rose, only it sadly lacks durability; hardly has it filled its allotted space before a huge wart on the stem, or some other unlooked-for catastrophe, cuts short at once its beauty and its life. *Cloth of Gold* is longer-lived as a rule, but then it is mostly a shy bloomer, and in many situations refuses to grow. No, neither of these come up to our ideas of the best Rose for clothing a wall. *Homère* comes nearer to our standard; but then its colour is hardly sufficiently decided to afford enough contrast with the wall surface, and besides its first flowers have mostly mal-

formed and monstrosly bad eyes. Its late flowers are, however, most elegant in form, while their colour, a soft mottled pink or blush suffused with rose, is almost unique among Roses. The foliage, too, is ample, green and shining, and admirably adapted for the clothing of walls.

But neither of these, nor any other Rose that I am acquainted with, is at all to be compared with *Gloire de Dijon* as a house or wall clother. Few Roses under fairly favourable circumstances grow so fast, perhaps none last so long. I hardly remember to have lost a *Gloire de Dijon* Rose through old age, and but comparatively few have succumbed to severities of weather, even in those Rose-slaughtering winters when the thermometer has run down to zero. On walls, too, it is almost evergreen as well as ever-flowering, and its foliage is almost as pre-eminent for size as its flowers are for their number, fragrance, and beauty. In vigour of growth and perpetuity of flowering it has few if any equals.

Gloire de Dijon is well known as one of the most free and persistent-blooming of all Roses. Either as a dwarf bush, a standard, a pyramid, or weeping Rose, it exhibits this extraordinary capacity for flowering, in all forms, places, seasons; but its full capacity for flowering can hardly be said to be seen unless on a high wall, such as the gable end of a house, a church, stable, barn, warehouse, or other high building. In such positions a few plants of *Gloire de Dijon* will produce not merely hundreds but thousands of blooms throughout the season. And hardly will the first flush of bloom have faded before a few stray blossoms will bridge over the chasm between the first and the second bloom; the latter, if not so numerous, mostly merging into a third, or even a fourth crop. Established plants of this fine Rose are in fact seldom without flowers from May to December.

Unlike some of our finest Roses, this *Glory*, as it is, and ought to be called, by way of pre-eminence, is not at all particular about stocks. It grows well alike on the briar, *Manetti*, *Banksian*, or any other free-growing stock, and better than either on its own roots. On the latter it often throws up enormous suckers, which may be used either to extend the old plant or regenerate it as desired. These

huge growths are not so floriferous as more moderate-sized ones, unless they are stopped several times in the making; but for laying the foundation of a new giant specimen, when the old plants show signs of decadence, nothing is more welcome or more successful than a couple of these monster shoots or suckers trained right and left within a foot or eighteen inches of the ground line.

A good border, a yard or more deep, two or three wide, and from six to twelve long, composed of the richest loam and manure, will not prove an excessive root-run for a fine Gloire de Dijon Rose. Under such favourable conditions there is hardly any limit to the area that the top will occupy and clothe with verdure, beauty, and fragrance.

The Gloire de Dijon possesses other merits that renders it especially valuable for the clothing of dwelling-houses. It is well-nigh disease as well as insect proof. It may be said to grow itself out beyond the power of disease, and its smooth and handsome foliage affords but scant foot-hold for rose pests. Hence no Rose is more free from aphides and other insects, and neither is any Rose more easily cleaned should it be attacked.

As to form, though some of the catalogues call it good, this can hardly be endorsed unless with reference to its buds and late flowers; but form is a secondary matter where it is desired to cover a house, church, warehouse, or high bare wall with roses. And its colour is admirable and various, half a dozen or more colours may in fact be gathered from the same tree, ranging from fawn through deep salmon to orange—colours admirably adapted for clothing, toning down, or contrasting with the glare or glitter of red or white bricks, or whitish stone, enlivening the gloom of older buildings, or intensifying the verdure of ivy-clad towers by their charming contrast. One of the most striking mural effects ever seen by the writer was an ivy-clad church tower clothed upon and over from base to summit with a noble plant of Gloire de Dijon Rose in full bloom.—D. T. FISH.

THE single Japanese ROSA POLYANTHA has given us several double-flowered varieties, which will be useful as pot plants for conservatory decoration, or for market purposes, and probably for out-door beds also. They are dwarf and bushy, with large corymbs of neat small blossoms. Of the sorts already known, Anne Marie de Montravel, white; Paequerette, white; Bijou de Lyon, white; and Mignonette, bright pink, are good.

REGISTER OF NOVELTIES.

NEW PLANTS.

ANTHURIUM SPLENDIDUM, *Bull, Cat.* 1883, 11, with woodcut.—Of this truly splendid plant we published an illustration and description at p. 52. We repeat the name here in order to include it in our Register of Novelties.

ANTHURIUM MACROLOBUM, *Bull, Cat.* 1883, 11.—A bold and striking plant, raised between *A. leuconeurum* and *A. pedato-radiatum*; it has a short erect stem, terete green petioles, and large deflexed leaf-blades, which are cordate acuminate, with an open sinus, and about three acute marginal lobes; the surface is of a dark green colour, marked with about five pale ribs; W. Bull.

ANTHURIUM TRIUMPHANS, *Bull, Cat.* 1883, 11.—A noble addition to the family of Orontiacs. It has an erect stem, and elongately heart-shaped leaves of a bright green, with prominent paler green ribs; the petioles are terete or in the older state quadrangular. The peduncles support a stout greenish-white spadix, on the outside of which is a narrow green spathe. Brazil; W. Bull.

CADIA ELLISIANA, *Baker (Bot. Mag., t. 6685)*.—A curious shrubby plant of the leguminous order, with flowers resembling those of some Malvad. It forms a small bushy plant, with pinnate leaves having 7—9 elliptic-lanceolate leaflets, 3—4 inches long, and bearing its nodding flowers in short racemes from the upper axils; these have obovate-spathulate petals, twice as long as the perianth, and convolute petals, forming a campanulate corolla of a rose-red colour. Madagascar; John Day, Esq.

DIFFENBACHIA GIGANTEA, *Williams, Cat.* 1883, 26, with woodcut.—A fine bold-habited species well adapted for exhibition. The leaves are broad ovate-acuminate, 20—24 inches long, of a fine deep green colour, the surface handsomely mottled with pea-green and creamy-white, the midrib being of a greyish white. United States of Columbia; B. S. Williams.

MAMMILLARIA SANGUINEA, *F. A. Haage (Gartenfl., t. 1111)*.—One of the pretty forms of dwarf Cacti, which it is to be regretted have gone out of fashion. It has a robust simple cylindrical stem 6—8 inches high, with ovate-oblong mammillæ of a glaucous green, tipped with a radiating series of 24—26 uniserial white spines; it appears to flower freely, producing its rosy-purple blossom in a dense zone near the top angle of the stem just below the growing point. Mexico; Haage & Schmidt.

MEDINILLA AMABILIS, *Dyer (Bot. Mag., t. 6681)*.—This noble Malastomad though described some ten years since, seems to be yet little known in gardens. It is a hothouse plant flowering freely and of very showy character, forming a fine companion plant to *M. magnifica*. The branches are stout, quadrangular; the leaves ample obovate or elliptic oblong, quintuple-veined; the flowers bright pink, forming a large terminal erect pyramidal panicle, but wanting the large pink bracts of *M. magnifica*. Java; W. Bull.

NEPENTHES HIBBERDII, *Williams, Cat.* 1883, 27, with woodcut.—One of the American hybrids, and a very fine one, apparently raised between *N. Sedeni* and *N. rubra*. It has flask-shaped pitchers 5—6 inches long, the basal part being considerably swollen, blood-red marked with pale yellowish green, the rim green and dull red neatly ribbed, and the lid green on the outside; the wings at the back are broadish, and distinctly fimbriated. It produces pitchers freely while young; B. S. Williams.

SCHLUMBERGERA MORRENIANA, *E. Morren (Belg. Hort., 1883, 46, tt 4—6)*.—This noble Bromeliad was introduced from South America by M. Linden, and

was flowered by M. Ferdinand Massange-de-Louvrex in 1882. It is a tall-growing species, with long thick arched leaves, lanceolate acuminate in form, green above, reddish purple beneath, and marked transversely on both sides by innumerable wavy lines of a brownish-red which give them a very ornamental character. The flower scape is as long or longer than the leaves, and terminates in a close panicle of spikelets which are furnished with purplish crimson bracts from which the creamy white flowers emerge. It was originally named *Massangea Morreniana*, but proves to be distinct from that genus.

NEW FLOWERS.

AMARYLLIS.—*Byron*, of the largest size, with broad slightly reflexed rich carmine-magenta coloured segments; extra fine quality. *Lady of the Lake*, flowers very large, of perfect form and substance, white, with slight dots and streaks of crimson here and there; a very fine light coloured variety of splendid quality. *Wordsworth*, vivid scarlet with streaks of white, and flushes of a peculiar shade of purple; flowers very large, and extra fine in every respect. *Tennyson*, very large flowers of a shaded orange scarlet colour, very handsome, and of extra fine quality. 1st-class Certificates to each of the foregoing, R.H.S., March 27; Veitch & Sons.

CINERARIAS.—*Princess of Wales*, pale bright magenta self, with a dark disk; very large novel and pleasing. *Mrs. Herrin*, a rich maroon-crimson self, the florets much reflexed. *Duke of Connaught*, a deep purple self, the sides of the petals margined with a narrow line of magenta. 1st-class Certificates were awarded to each of the above by R.H.S., March 27; J. James.

HYACINTHS.—The following new varieties were exhibited by Messrs. Veitch & Sons, of Chelsea, at the meeting of the Royal Horticultural Society on March 27:—*Actrice*, D. R., very large double bells, lively pink in colour, wanting symmetry in the spike; distinct. *Balsaminæflora*, D. R., a variety with very large bells, delicate blush with pink stripes; very distinct, strong grower. *Duchess of Albany*, S. R., blush ground with flakes of pink; very pretty and distinct; confused spike. *Empress of India*, S. B., very pale claret; bright and pleasing; fine bells and spike. *General Roberts*, S. R., showy pale carmine, with pale margins to the segments; excellent compact spike, very bright and pleasing. *Gerard*, S. B., a very fine and distinct variety of the mauve group, lilac and blue mixed, more blue in the centre; fine bells and spike. *Gambetta*, S. B., deep greyish-blue, margined white, distinct and pleasing; not shown in good condition. *Harlequin*, S. B., lilac and crimson, the former predominating, and dashed with green towards the tips of the segments; distinct, but thin in the spike. *Lilas Minor*, S. B., wine mauve, pale small bells, very close spike, handsome and distinct. *Mauve Queen*, rosy-mauve with white centre, small bells, confused spike, pleasing colour. *Passe Incomparable*, S. R., very rich carmine, small bells, singularly bright in colour, small spike. *Pink Perfection*, S. R., a very distinct large belled variety, a lovely delicate blush with a broad pink stripe along each segment, and rosy pink reverse to the bells; extra fine; 1st-class Certificate R.H.S., March 27. *President Grevy*, S. B., deep blue with white centre, distinct and very pleasing, small bells. *Safrano*, S. Y., pale buff yellow, a pleasing shade; good bells and fine spike. *Souvenir de J. H. Veen*, S. B., very rich deep blue, large well-formed bulbs and very fine spike; 1st-class Certificate R.H.S., March 27. *Vroegop*, S. R., in the way of *Grandeur à Merveille*, but larger and finer in bells and spike.

HYACINTH.—*Marchioness of Lorne*, buff yellow with a salmon-pink line along each segment; distinct and pleasing; W. Cutbush & Son.

MYOSOTIS DISSITIFLORA *perfecta*.—A very large and finely-formed variety of *M. dissitiflora* that must presently displace the older type; R. Dean.

MYOSOTIS DISSITIFLORA *alba*.—A pure white form of this fine Forget-me-not, not taking on the slightest taint of colour; charming for cutting; R. Dean.

PANSIES.—We find that the new Show and Fancy varieties noticed in our Register of Novelties at p. 59, were sent out by Messrs. R. B. Laird & Sons (formerly Downie & Laird), of Edinburgh, who are well-known growers of these flowers.

POLYANTHUS (*Hose in Hose*).—*Orange Beauty*, fine deep orange, large stout flowers; extra fine for pot work. *Scarlet Gem*, a variety with bright orange-red flowers, most effective in the sunlight, and an excellent border. *White Queen*, pure white, large and very fine. All shown by R. Dean.

PRIMROSE, *Magenta Queen*, bright purple magenta, very free and most effective; R. Dean.

RHODODENDRON, *Triumphans*, a greenhouse variety of the Japanese type, the flowers about 2½ inches across, and of a brilliant scarlet-crimson colour; perhaps one of the richest coloured varieties yet obtained; 1st-class Certificate R.H.S., March 27; Veitch & Sons.

ROSE, *William Francis Bennett*, a new seedling pedigree tea variety, very handsome, particularly in the bud state, the colour rich crimson-carmine. It is very free, and will make an excellent decorative variety; 1st-class Certificate R.H.S., March 27; H. Bennett.

ROSE (*Polyantha*) *Mignonette*, pale bright pink, very pleasing indeed, very free but compact growth, and an excellent companion to the white type, *Anne Marie de Montravel*; 1st-class Certificate R.H.S., March 27; Paul & Son.

NEW FRUITS.

APPLE, *Calville Madame Lesans* (Rev. Hort., 1883, 113, fig. 22).—M. Carrière describes this as a vigorous exceedingly fertile Apple, with dark brown branches dotted with white, and strongly toothed smooth leaves. The fruits are large, higher than broad, obviously ribbed, recalling the appearance of the Calville blanc. Eye placed at bottom of a deep narrow cavity; stalk set in a deep cavity. Skin dull creamy white, deepening to a soft yellow in the fruit-room. Flesh firm, not brittle, white or slightly yellowish, delicate, juicy, of a fresh agreeable flavour, quite *sui generis*; pips small. This variety was obtained at Clamecy from a pip of the Calville rouge, by M. Eugène Sagot, and will be put into commerce by M. Lesans-Bertrand, nurseryman at Clamecy. "It is certainly a variety of the future which will play an important part among desert fruits, having almost all the advantages less the inconveniences of the Calville blanc."

GRAPE, *John Downie*.—A new grape about which further information seems to be required. According to Mr. Barron (*Vines and Vine Culture*) it is said to have been raised in Scotland from a berry on a bunch of Muscat of Alexandria that came half black half white. In appearance both bunch and berry resemble those of Gros Colman, being of the largest size; but it is said to be of superior quality; Laird & Sons.

PEAR, *Amédée Thirriot* (*Bulletin d'Arbor.*, &c., 1883, 65, with col. pl.).—This pear not a novelty, but little known in Belgium, forms a vigorous tree, regular in growth, and of remarkable fertility. The fruit is large, oval, often bossed like the Duchesse d'Angoulême. Flesh melting, of first-rate quality. Skin pale yellow. Ripens in November. The fruit here figured and described were from an unpruned bush in the establishment of M. Machard-Grammont; and M. Burvenich takes the opportunity to recom-

mend bush culture as often facilitating the testing of varieties which if trained would be longer in reaching the bearing state. Bush culture, he says, is an excellent system for amateurs to follow.

PEAR, *Fondante Thirriot* (*Bulletin d'Arbor.*, &c., 1883, 5, with col. pl.).—A first-class new pear, described as having sometimes the aspect of Duchesse d'Angoulême, and sometimes the colour of Louise Bonne d'Avanches. The tree is vigorous and fertile. The fruit is large pyriform, rather elongated, the eye superficial with open divisions, the stalk rather large and long, fleshy, obliquely inserted. The skin is yellowish green, spotted with brown around the eye. The flesh is white, melting, buttery, with abundant sugary juice, and an agreeable perfumed flavour, which is most pronounced as it commences to ripen. It begins to ripen at the end of October, and continues until the middle of December. It was raised by MM. Thirriot frères, ten years since, but is as yet too little known and distributed.

NEW PUBLICATIONS.

The GARDENERS' CHRONICLE (Mar. 17—Apr. 14) contains:—*Dendrobium luteolum chlorocentrum*, Rehb. f. (p. 340, fig. 48), a variety having the principal tufts of hairs on the centre of the flowers of a greenish colour; Williams.—*Oncidium ustulatum*, Rehb. f. (p. 340), a fine Oncid of the group of *Cyrtorchilums*, with the habit of *O. serratum*. The flowers have the dorsal sepal transverse emarginate crisped, of a sepia brown with a pale border, the lateral sepals being cuneate oblong not crisped; the petals are hastate, shortly clawed, much undulated and toothletted, with yellowish lines principally near the edge; the lip has its cuneate-oblong acuminate middle lobe reddish purple with sulphur-coloured calli, and the side lobes brown; Columbia; Shuttleworth & Carder.—*Spathoglottis pacifica*, Rehb. f. (p. 340), a pretty terrestrial Orchid with the habit of *Bletia verecunda*, bearing whitish-lilac flowers as large as those of *Calanthe Masuca*, with a lilac and yellow lip; Pacific Islands; W. Bull.—*Oncidium Brunleesianum*, Rehb. f. (p. 340), a handsome Oncid, with linear ligulate pseudobulbs, a pair of oblong-ligulate leaves, and an effuse drooping panicle of flowers, of which the back sepal is greenish-yellow tinted with brown near the apex, the lateral ones connate bidentate greenish yellow; the petals of the same colour with a brown stripe in the upper part, the lip broad trifid, with the front lobe dark brown-purple, the disk marked with red and yellow bars; Heath & Son.—*Salvia mexicana minor*, Benth. (p. 341, fig. 49), a remarkable plant cultivated as *S. nigricans*; it produces long spikes of flowers apparently black, but which when seen by transmitted light are of the richest violet purple; Canuell & Sons.—*Laelia anceps Hilliana*, Rehb. f. (p. 342), a very lovely Orchid, approaching *L. a. Dawsoni* in having snow-white sepals and petals, while the radiating lines of the lip are very prominent; quite distinct from *L. a. Veitchiana*; W. Lee, Esq.—*Oncidium monachicum*, Rehb. f. (p. 368); this is a fine Oncid of the *Cyrtorchilum* group, related to *O. metallicum*. The flowers are rather large, with brownish sepals, the dorsal one having a narrow crispy border of yellow, cinnamon-coloured wavy petals with sulphur blotches and edges, and a small brown lip with a remarkable double callus; "the column may be compared to a nun having her arms appressed to her sides; hence the name"; New Grenada; B. S. Williams.—*Rodriguezia caloplectron*, Rehb. f. (p. 368), a New Grenadan plant allied to *R. granatensis*, with small oblong pseudobulbs, solitary thick lanceolate leaves, and small yellowish white flowers. The var. *rhodoptera* has the upper sepal and petals bordered with bright mauve purple, and is a much finer thing; J. Day, Esq.—

Dendrobium Johannis semifusum, Rehb. f. (p. 368), a variety in which the sepals are yellow, the petals light sepia brown, and the lip deep yellow with reddish brown margins; W. Bull.—*Exacum affine*, Balfour (p. 368), a neat little Gentianaceous annual or biennial from Socotra, 6 inches high, with dark green ovate three-nerved leaves, and terminal clusters of violet-purple flowers with yellow anthers; Socotra; Haage et Schmidt.—*Hedychium peregrinum*, N. E. Brown, a handsome Scitamineous plant with leafy stems 3—4 feet high, elliptic or elliptic-lanceolate leaves 12—15 inches long, and spikes 6 inches long of narrow petalled yellowish-green flowers with a white lip and orange-red stamen; Madagascar; Kew.—*Colchicum crociflorum*, Regel (p. 372, fig. 55), a distinct and handsome new Meadow Saffron, with ovoid bulbs, lanceolate leaves, and several flowers with a slender purple-tinted tube, and six oblong-lanceolate milk-white segments each having three distinct purple stripes down the back; Turkestan, and the Alatan Mountains; Kew.—*Cotyledon Corderoyi*, Baker (p. 373, fig. 56), a rare as well as neat little succulent greenhouse plant; the smooth shining whitish-green leaves form a rosette 3—4 inches in diameter; and the small red and yellow flowers grow in panicled cymes on slender erect peduncles.—*Anthurium splendidum*, Hort. Bull. (p. 381, fig. 58), a most remarkable plant, of great beauty, and absolutely distinct; it has massive cordate leaves, which are singularly blistered or rugose, and the bright velvety green colouring is very striking.—*Eria Elwesii*, Rehb. f. (p. 402), a tiny curiosity, with depressed lenticular flat pseudobulbs, oblong-lanceolate petiolate leaves, and small light brownish-ochre flowers; Himalayas; Sir C. W. Strickland.—*Rodriguezia Lehmanni*, Rehb. f. (p. 403), a New Grenadan species, with ligulate-ovate two-edged pseudobulbs, solitary cuneate oblong-lanceolate leaves, and pendent racemes of whitish ochre-coloured flowers with a brown wash, the lip with a yellow disk and two great cinnamon blotches on the anterior part; Col. Vipan.—*Calanthe Cecilia*, Hort. Low, Rehb. f. (p. 432), a fine Malayan species, near *C. parviflora*, with the flowers light ochre-coloured "with a most delicate and delightful hue of purple," the sepals and petals are obtuse, the lip quadrifid; Low & Co.—*Dendrobium nobile formosanum*, Rehb. f. (p. 432), a pretty variety from Formosa, with white flowers, having the petals and lip tipped with mauve-purple; B. S. Williams.—*Epidendrum Endresii*, Rehb. f. (p. 432), a fine species from Costa Rica with slender caespitose stems, cordate-ovate obtuse leaves, and loose racemes of flowers having white mauve-tipped sepals and a mauve-coloured lip with a triangular orange callus at its base; F. Sander.—*Cypripedium Schrödera*, Hort. Veitch, Rehb. f. (p. 432), a hybrid raised by Mr. Seden between *C. caudatum* and *C. Sedeni*, and dedicated to the Baroness Schröder; the upper sepal is ochre-coloured with purple veins, the petals dependent broad undulated, whitish in the centre and marked with purple, and the lip broad blunt and purple; the leaves are like those of *C. Sedeni*; Veitch & Sons.—*Osmunda japonica corymbifera*, T. Moore (p. 466), a very elegant hardy or half hardy crested fern from Japan, having the apices of the frond itself and those of all the segments multifidly cut with obtuse lobes; this species is one of those having separate fertile fronds; it is deciduous, losing its fronds in winter; Japan; Veitch & Sons.—*Aërides lepidum*, Rehb. f. (p. 466), an Indian Orchid, with lorate bilobed leaves, and rich racemes of white flowers with the tips of the petals as well as the anterior of the tip part purple; the spur is curved; Lt.-Col. Berkeley.—*Cælogyne chloroptera*, Rehb. f. (p. 466), a Philippine species with ovate pseudobulbs, oblong acute leaves and racemes of five or six flowers, "equalling those of a good *C. flaccida* in size,

but nearly as green as grass"; the whitish lip is trifid, with five short keels; F. Sander.

LA BELGIQUE HORTICOLE (Feb.) contains figures of *Vriesea Barilletii*, E. Morr. [t. 3], a species from Ecuador, of moderate growth, with a rosette of brownish-green leaves which are swollen at the base and again enlarged near the acuminate apex; the flowers are yellow, and grow in an ancipitous spike of close boat-shaped bracts which are yellow minutely and thickly spotted with dark red; M. Barillet-Deschapes. — *Sehlumbergera Morreniana*, E. Morr. [tt. 4—6], another Bromeliad of grand dimensions, the leaves thick arched a yard long, beautifully veined, and the flower stem terminating in a compound head of crimson bracts with white flowers; S. America; M. F. Massange-de-Louvrex.

BULLETIN D'ARBORICULTURE, &c., for March figures a dessert Pear *Amédée Thirriot*, a large oval yellow fruit, ripening in November, a variety of the first quality, as yet very little known.

JOURNAL DES ROSES for March contains a good figure of the *Rose Persian Yellow*, whose bright yellow blossoms are well displayed by the small elegant but dark green foliage. This rose, it is stated, was imported from Persia into England about 1838. M. Petit-Coq, in describing it, observes that it is a double variety of *R. lutea* of Miller, *R. Eglanteria* of Linnæus; and that it is not of long duration when grown upon its own roots. The flowers sometimes reach a diameter of four inches. The number for April has a figure of H.P. *Rose Eugène Furst*, a eup-shaped flower with smooth broad petals of a rich velvety crimson, moderately pale and very fragrant; it was raised and sent out in 1876 by Messrs. Soupert and Notting of Luxembourg.

L'ILLUSTRATION HORTICOLE (liv. 4) contains figures of *Dieffenbachia magnifica*, L. Lind. & Rod. [t. 482], a Venezuelan Arad, with bold ovate acuminate green leaves, heavily marked between the veins with spots and blotches of white; a very fine form; Compagnie Continentale d'Horticulture. — *Camellia Madame Lemonnier* [t. 483], a fine variety raised by M. Lemonnier from Lavinia Maggi; it is of fine form, creamy white, faintly striped and shaded with rose. — *Vanda Hookeriana*, Rehb. f. [t. 484], already fully described at p. 60. There is also a plate giving a bird's-eye view of the new entrance and the numberless plant houses in the establishment of the Compagnie Continentale.

REVUE HORTICOLE (April 1—14) figures *Adenocarpus decorticans*, Boissier (p. 156), a hardy Spanish shrub, with crowded sessile awl-shaped leaves, and numerous yellow leguminous flowers, which give the plant something the aspect of the common furze. — *Onoseris Drakeana*, Ed. André (p. 180), a frutescent composite from New Grenada; it is sparingly branched, the trunks and under surface of the ovate-lanceolate or hastate leaves clothed with whitish wool, the flower heads having the ray florets of a fine purple; M. Bréanté.

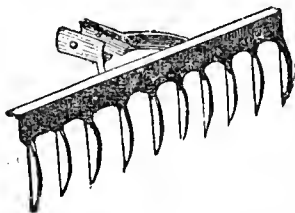
The GARTENFLORA (Mar.) contains—*Viola pedata atropurpurea*, D.C. [t. 1110 a], a pretty dwarf hardy perennial with pedatifid leaves, and numerous flowers, of which the three lower petals are white with the faintest tinge of lilac, and the two upper ones are dark purple. — *Saxifraga retusa*, Gouan [t. 1110 b], a pretty little Alpine herb, of close prostrate growth, furnished with greyish-green obovate triquetro-carinate foliage, and abundant starry pink flowers; Alps and Pyrenees. — *Mammillaria sanguinea*, F. A. Haage [t. 1111], one of the interesting group of dwarf Cacti, with a cylindrical stem covered with stellate spines, and bearing rosy-purple flowers in a dense ring near the apex; Mexico. — *Anthurium elegans*, Engler [t. 1112], an elegant Orontiad, with green leaves having terete petioles, and a pedato-radiate limb of several unequal narrowish segments, and green

lanceolate spathes free from the obtuse cylindrical spadix; Columbia; St. Petersburg Botanic Garden.

NEW GARDEN APPLIANCES.

GARDEN RAKE.—The accompanying figure represents a new form of Garden Rake, which will no doubt be found to be an improvement on the older forms, inasmuch as it is made of wrought steel, all in one piece, and the teeth are twisted so as to give greater resisting power.

The socket for the handle is in two pieces, so that any sized handle can be readily introduced and fixed. It is a strong, light, and handy tool, and if made known is likely to come freely into use. The makers are Messrs. Sabatier & Co., Bread Street Hill, E.C.



STOVE ORNAMENTS.—Some very pretty floral designs for stove ornaments have been introduced this season, and they come sufficiently within our lines to justify us in noticing them. We have been especially pleased by some of those introduced by S. Hildesheimer & Co., of Silk Street, which are exceedingly correct and tasteful. One, a group of lilac flowers is quite life-like and pictorial from its naturalness. Another, a Begonia is good, the white and different shades of green on the upper surface of the leaves contrasting well with the red of the under-surface and the stalks. A Geranium, which is represented as in a decorated china flower-pot, has variegated leaves and a good amount of scarlet blossom. There are others: some representing animal life, as the Kingfisher in a lake scene, with water-lilies and two of these brilliant birds in the foreground.

GARDEN GOSSIP.

A GAIN has the GHENT QUINQUENNIAL FLOWER SHOW become a thing of the past, but it will long linger in the memory of those of our countrymen who took part in it, whether their thoughts revert to the

high quality of the show itself, or the unbounded hospitality of their hosts. The show was opened on April 15 by Her Majesty the Queen of the Belgians, the King being confined by indisposition, and it remained open until April 22, during which period, as the weather was fine, it must have been well attended. These shows at Gand are always grand, for where else is there such an abundance of material to draw upon? but they vary from time to time in the quality of the different exhibits. On this occasion the place of honour must be given to the Indian Azaleas, which were shown in splendid condition, those from the collections of M. de Ghellinek de Walle and Comte de Kerchove being in every way perfect. The *Imantophyllums* were another striking feature and a novel one, for they have almost sprung up in variety since the last Quinquennial, and now they are being raised by thousands. There are improvements of size, form, and colour amongst the later-named sorts, but the change is slow, though fortunately the worst are really fine things. Hyacinths from Holland, *Cyclamens* from Holloway (Mr. B. S. Williams), and *Pelargoniums* and Double *Cinerarias* from Swanley (Mr. Cannell), were conspicuous elements of the floral display, while the *Camellias* seemed to be past their best and not very effective. Palms, Cycads, and foliage plants were abundant, and mostly very fine. Ferns, especially the arborescent ones, were a trifle below par; nevertheless there were a few grand specimens in the *Cyathea medullaris* and *C. dealbata* of M. Ghellinek de Walle. Some remarkably fine examples of Standard *Laurustinus* and of Standard and Pyramidal *Bays* were also shown in the hardy department. The kindness and generous hospitality which the visitors met with everywhere will never be forgotten.

— THIS evergreen Mexican *CHOISYA TERNATA*, when introduced, was described as a stove plant; but it has been found to flower well in a cool greenhouse, and it will also thrive admirably trained against a wall in the open air, where in all but the severest winters it will stand without having its leaves damaged, and flower abundantly in May and June. The pure white flowers bear much resemblance to Orange blossoms, while the trifoliate leaves, of a firm and leathery texture, are covered on both surfaces, as well as the flowers, with oily glands which give to them a rather strong but not disagreeable odour.

— THE question as to the DISTANCE AT WHICH VINES SHOULD BE TRAINED FROM THE GLASS, is one of some practical importance, upon which we find the following remarks by "E. H." in the *Field* newspaper:—"Thirty years ago," he says, "it was a matter of some moment, in the case of old-fashioned houses, to place the foliage near the glass. Now, such floods of light and sunshine are admitted in modern-built houses that there is no longer any necessity to come up to the glass for it. Close under a roof consisting of nearly all glass in large squares, the difference between the day temperature when the sun shines and that at midnight on a clear night is very considerable—too much, in fact, for healthy growth." When he first had the management of such a house he thought it was the hot sunshine which made the foliage look so pale as it did. But when the vines were dropped further from the glass, it was discovered that the evil was due rather to the radiation going on during bright starlight nights than to the sun, although the latter aggravated the matter by causing a greater change in the temperature. He adds that he is convinced that we may with advantage, in the case

of recently-built houses, drop our vines two feet from the glass.

— A WELL-KNOWN writer, "J. S. W.," treating of the TOMATO, remarks that it rejoices in a very high temperature, with plenty of light and free ventilation, and will bear long and well under such conditions; but it will also thrive in a temperature ranging constantly from 60° to 70°. To have very early crops, he recommends cuttings of old plants to be struck in August or September, and wintered in a warm house or pit till December or January, and then planted out or potted. These plants will fruit in February or March, and continue to bear the whole summer and autumn.

— AMONGST the taller Cacti, now too much neglected, *PHYLLOCACTUS AMENUS* holds a distinguished place. It is a splendid flower, beyond description. The flowers are as much as 9 inches across, with the petals, as is usual, ranged in several rows, the outer ones scarlet, the inner ones also scarlet, but deeply edged with violet crimson, the two brilliant hues becoming blended towards the apex of the petal. It was flowered last year in Mr. J. T. Peacock's collection at Sudbury House, Hammersmith, and has been designated as a Cactus really worth growing—a very glory of colour, as well as fine in form.

— THE REED-WORKERS in certain parts of France, especially in Provence, and chiefly those who manipulate the stems of *Arundo Donax*, are said to be sometimes affected by a painful irritation of the nose, eyes, and throat, followed by erythematous swelling, which extends to the hands and trunk, cats and dogs being also affected. An examination of the reeds has shown that they are covered with a mould consisting of the spores and mycelium of a fungus, *Sporotrichum dermatodes*, which being developed under the influence of prolonged exposure to moisture, the spores become shaken off as dust during the manipulation of the reeds, and then irritate the exposed parts of the skin on which they lodge. Although usually trifling, the malady sometimes assumes a severe form, lasting nearly a fortnight, and has been known to cause death. It may apparently be prevented, says the *Lancet*, by the simple expedient of washing the reeds before their manipulation.

— THE use of CARBOLIC ACID AS AN INSECTICIDE is recommended by a correspondent of the *Journal of Horticulture*, who writes: "The value of carbolic acid for destroying mealy bug and other horticultural pests has been certified, but the fact that the addition of a little glycerine to the acid before its dilution renders it perfectly soluble in water is not generally known. Any one who takes the trouble can, however, in this way secure a perfectly reliable insecticide of any strength required."

— WE find the following note, by Prof. Westwood, on the origin of the *BLenheim ORANGE APPLE*, in the *Gardeners' Chronicle*, (xviii., 142):—"Mr. George Kempster, tailor, who resided at Old Woodstock, and died there September 15, 1773, was the first grower of the *Blenheim Orange Apple*. When a young man, he observed a plant growing close to the wall of the house, and, liking

its appearance, he removed it into a flower-pot, where it became so large that he transplanted it into the garden. In due time it produced two apples, which proved remarkably fine. The tree continued to thrive and bore fruit regularly, one year its produce amounting to 21 bushels. Every one was desirous of possessing a Kempster Pippin, as it was at first called; and such was the eagerness to obtain grafts, that large branches were repeatedly torn off in the night-time. In 1811, Mr. Whitman, the Duke of Marlborough's gardener, prevailed on his Grace to allow them a place on his table, and the Duke highly approving of them, they have since obtained the name of the Blenheim Orange. In 1820, Mr. Cook, fruiterer in Covent Garden Market, sold a bushel of them for 14s., they being before this period unknown in the market. The original tree was standing in 1826. On September 21, 1822, five of these Apples gathered in the garden of Mr. Farrow, of Woodstock, weighed as follows:—No. 1, 1 lb. $\frac{1}{2}$ oz.; No. 2, 1 lb. $5\frac{1}{4}$ oz.; No. 3, 15 oz.; No. 4, 1 lb.; No. 5, 1 lb.; total, 5 lb. $4\frac{3}{4}$ oz.; when first gathered their total weight was 88 $\frac{1}{4}$ oz. They were exhibited at the October meeting of the Horticultural Society, where the Banksian Silver Medal was awarded for them. In the same year Mr. Griffin, surgeon, of Deddington, gathered one of these Apples weighing 24 oz. Of the largest of these a model in wax was made, which is now (1882) in my possession."

— As regards VINE-CULTURE IN CALIFORNIA, it has been stated that the area devoted to this object is upwards of 80,000 acres, averaging 800 vines to the acre, or a total of some 64,000,000 vines. Of this large number, however, probably 25,000,000 are not in bearing, while the *Phylloxera* has seized upon some 5,000,000 more. The great size attained by many of the vines shows how well the Californian soil is adapted to them.

— THE USE OF EMULSIONS OF PETROLEUM AS INSECTICIDES is recommended by Prof. Riley, the American State Entomologist, who shows that for ordinary practical purposes soap and milk are among the most available substances for their production. Ordinary bar soap scraped and rubbed into a paste at the rate of twenty parts soap, ten parts water, thirty parts kerosene, and one part of fir balsam, will make, when diluted with water, an emulsion stable enough for all practical purposes, as the slight cream which in time rises to the surface, or the flakiness that often follows, are easily dissipated by a little shaking. Soap emulsions are, however, less satisfactory and efficient than those made with milk. Emulsions with milk may be made of varying strength, but one of the most satisfactory proportions is two parts of refined kerosene to one part of sour milk. This must be thoroughly churned (not merely shaken) until butter is formed, and is then quite stable, and will keep indefinitely in closed vessels; it may be diluted *ad libitum* with water when needed for use. The time required to bring the butter varies with the temperature, and both soap and milk emulsions are facilitated by heating the ingredients. The diluted emulsion, when prepared for use, should be finely sprayed on to the insects to be killed, its strength varying for different insects or plants, and its effect is enhanced when brought forcibly in contact with the insects. It must be applied with care to most deciduous fruit-trees in order not to injure them.

— A GIGANTIC scheme of FRUIT-GROWING has been inaugurated, as we learn from the country papers, by Lord Sudeley, at Toddington,

near Cheltenham. The fruit-trees were planted two years ago, the total number and varieties being as follows:—93,000 gooseberries, 20,053 plums, 167,000 black currants, 2,919 apples, 852 pears, 8,845 damsons, 532 cherries, 10,000 red currants, 25,000 raspberries, 100 cob-nuts, and 52 acres of strawberries. There has been, in addition, 100 Scotch firs and 10,000 poplars planted for sheltering purposes.

In Memoriam.

— MR. JOHN COLLINSON died at Chester on March 26, aged 81 years. Mr. Collinson had been head gardener for seven years to Sir Watson Taylor, Earl's Court, Wiltshire, and was for forty years head gardener to the Duke of Westminster at Eaton Hall. Some ten or twelve years ago he retired from the gardens at Eaton Hall with a pension from the Duke, of his full salary, with a house and garden rent free.

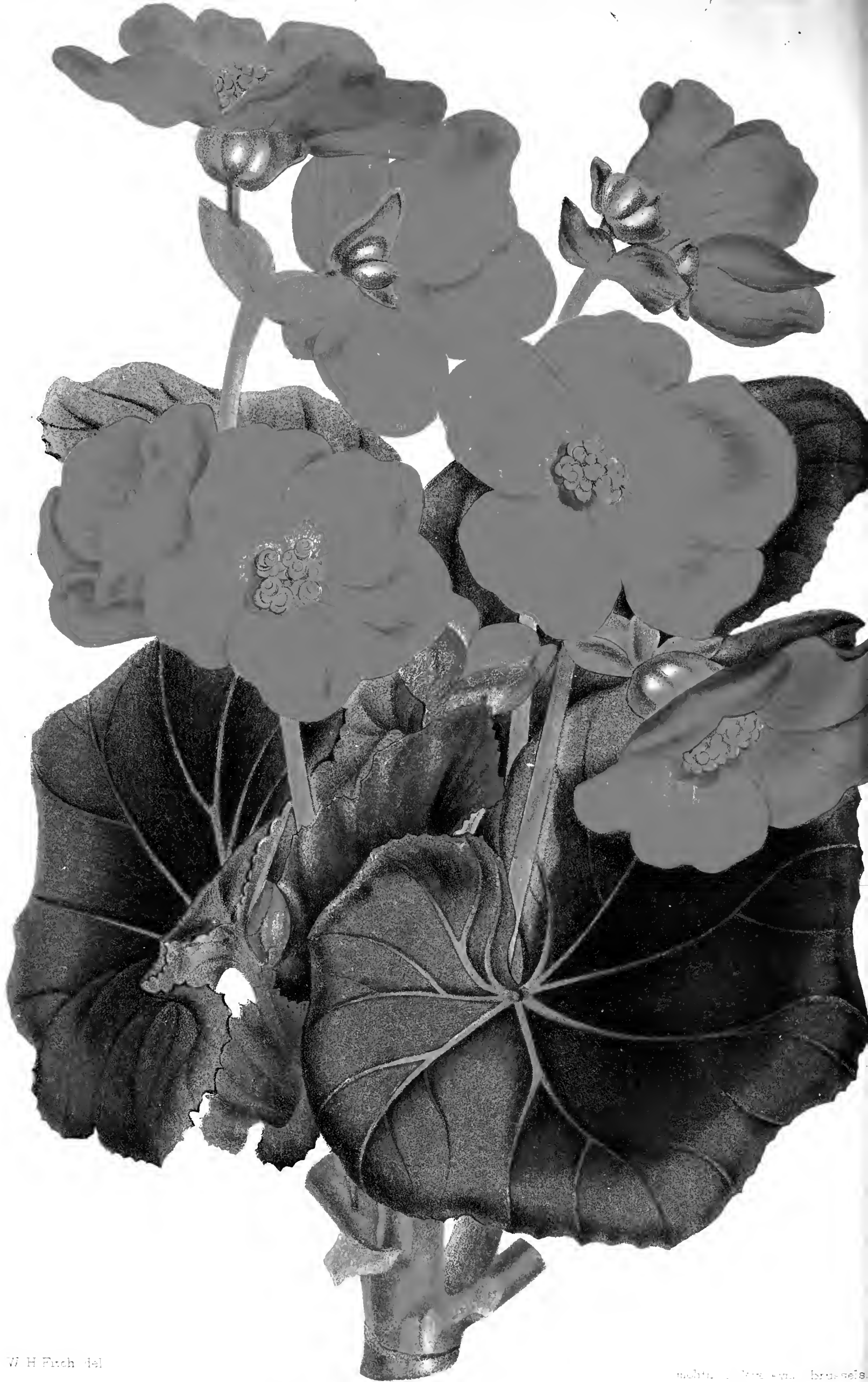
— MR. HERBERT SMITH, eldest son of Mr. James Smith, of the Darley Dale Nurseries, died on March 31, aged years.

— MR. JOSEPH C. SPYERS died at Torquay on April 10, at the age of 32. He was Orchid-grower to Sir Trevor Lawrence at Burford Lodge, Dorking, and his employer has penned a most graceful tribute to his memory, in which he says:—"He was an excellent gardener, gifted with much observation, a retentive memory, and a keen love of his work and his plants. He had accumulated a large and varied store of information bearing on horticulture, especially on the cultivation of Orchids. He was a great favourite with all about him, and during the nine years he was in my service there was never a dispute or misunderstanding in the garden. In all things he was upright and honourable, and his many good qualities had won for him the esteem and regard of all who knew him."

— MRS. EMMA SHERWOOD, wife of N. N. Sherwood, Esq., and last surviving daughter of the late William Hurst, sen., died on April 18, at Dunedin, Streatham, in her 39th year, greatly regretted.

— MAJOR-GENERAL H. Y. D. SCOTT, C.B., F.R.S., died at Sydenham on April 16, aged 61 years. He was educated at Woolwich, and entered the corps of Royal Engineers. Subsequently he became one of the officials at the South Kensington Museum, and in this way began his connection with the Royal Horticultural Society, of which he was Secretary from 1866 to 1873. He was also Secretary to the Royal Commissioners for the Exhibition of 1851; and as Director of Buildings at South Kensington acted as architect to the Royal Albert Hall and Science Schools.

— MR. RICHARD WEATHERILL, of Woodside Nursery, Finchley, died recently in his 58th year. He began life as a private gardener, but twenty-five years ago he turned his attention to growing for market, in which he was very successful. He was a large grower of Pelargoniums, Solanums, and Cinerarias. The Woodside establishment has become, under his guidance, one of the largest and best appointed market-nurseries in the kingdom.



W H Finch del

W H Finch del

Begonia Thomas Moore

BEGONIA THOMAS MOORE.

[PLATE 589.]

THE Chiswick collection of tuberous Begonias has acquired well-deserved notoriety for the fine and highly varied strain of these showy flowers which Mr. Barron has worked up, the excellence of which has been sufficiently attested by the number of certificates which have been granted to varieties derived from this source, amongst which occur A. F. Barron, Mrs. Stevens, Queenie, A. Hemsley, Dr. Denny, Dr. Hogg, Henry Webb, Nellie Barron, and others. Their name is now legion, and the strides they have made during the few years since they were first introduced has been something extraordinary—the most extraordinary being Mr. Cannell's six-inch City of London and others M. Edouard André recently

pourtrayed in the *Revue Horticole*, and some of Messrs. Laing & Co.'s novelties.

The variety we now figure does not attain these enormous dimensions, but it is of large size, of brilliant colour, and of a distinct form and habit of growth; so that the Floral Committee when awarding it a 1st-class Certificate, on July 7, 1882, regarded it as the foundation of a new type characterised by fulness and rotundity of the individual flowers. It is of erect habit, with short fleshy stems, and moderate-sized leaves, while the flowers are numerous and bold in character, of a brilliant light scarlet, and almost circular in form, being composed of five broad overlapping petals which are roundish in outline, and make up a beautiful and effective flower.—M.

TULIP SHOWS.

ROYAL NATIONAL TULIP SOCIETY.

THE Exhibition of this, the leading Tulip Society, took place on June 2, in the Manchester Botanical Gardens. It is years since such an extensive and thoroughly fine display of blooms has been seen; and it was a great surprise for many, for throughout the entire exhibition an excellent quality was discernible—the flowers generally being of good size, fine, handsomely marked, with the colours rich and striking. The exhibitors we are informed—for circumstances prevented our being present on this occasion—came mainly from Lancashire and Cheshire, some from Yorkshire, and one or two from Staffordshire. The date which had been fixed on, was too late for Nottingham and Derby growers; and Mr. Thurston, of Wolverhampton, who always shows in excellent style, had kept his flowers in a cool cellar for a week past in order to preserve them for this show. On the other hand, Mr. Barlow, who was awarded nearly thirty prizes, would have been at his best a week later, his flowers generally being wanting in growth. There were over thirty competitors on this occasion, and though since the last Tulip meeting a few have fallen away from the ranks through death (notably our occasional correspondent the late Mr. John Hepworth, of Huddersfield), and other causes, it is pleasant to learn that there was

no lack of enthusiasm and that the ranks of the Tulip fanciers have been strengthened by the enlistment of new recruits.

RECTIFIED TULIPS.

Class I. 12 dissimilar, 2 feathered and 2 flamed of each class.—1st, Rev. F. D. Horner, Kirkby Malzeard, with beautiful examples of Sir J. Paxton and Orion, flamed: Garibaldi and Orion, feathered bizarres: Rose Celestial and Triomphe Royale, flamed: Heroine and Modesty, feathered roses: Talisman and Queen Charlotte, flamed: Mrs. Cooper and Alice Gray, feathered bybloemens. Of these Alice Gray, Mrs. Cooper, Orion, Queen Charlotte, Triomphe Royale, and Modesty, were as nearly perfect as Tulips could be—good in size, perfect in marking, and pure in the ground. 2nd, Mr. W. Kitchen, Stockport, with Pauline and Ajax, flamed: Masterpiece and Magnum Bonum, feathered bizarres: Talisman and Chancellor, flamed: King of the Universe and Bessie, feathered bybloemens: Triomphe Royale and Aglaia, flamed: Clio and Mr. Lea, feathered roses. 3rd, S. Barlow, Esq., Stakehill House, Castleton, with Sir J. Paxton and Ashmole's Seedling, flamed: George Hayward and Sulphur, feathered bizarres: Aglaia and Annie McGregor, flamed: Modesty and Heroine, feathered roses; Talisman and Adonis, flamed: Mrs. Cooper and Bessie, feathered bybloemens. 4th, Mr. John Morris, Leigh. 5th, Mr. John Wood, Royton. In this class there were thirteen stands set up, an unusually large number, and a circumstance that illustrated in a remarkable degree the vitality of the Tulip fancy. The first three stands were very close in merit; indeed it was generally thought to be a very near run between the Rev. F. D. Horner, of Kirkby Malzeard, and S. Barlow, Esq., Stakehill House, Castleton; but the awards of the judges showed that Mr. Horner was 1st; Mr. W. Kitchen 2nd; and Mr. Barlow 3rd; and it was generally felt that the judges had attached too much importance to size and not enough to quality.

Class II. 6 dissimilar, 1 feathered and 1 flamed of each class.—1st, Mr. D. Woolley, Stockport, with

Sir J. Paxton, flamed; and a seedling with a clear golden ground and dark feather, said to have broken from what the Lancashire fanciers term a dirty bizarre breeder; Mabel, flamed, and Heroine, feathered roses; Chancellor, flamed, and King of the Universe, feathered bybloemens. 2nd, S. Barlow, Esq., with Sir J. Paxton, flamed, and George Hayward, feathered bizarres; Annie McGregor, flamed, and Modesty, feathered roses; Talisman, flamed, and Bessie, feathered bybloemens. 3rd, Mr. W. Kitchen, with Prince of Wales, flamed, and Masterpiece, feathered bizarres; Triomphe Royale, flamed, and Mabel, feathered roses; Duchess of Sutherland, flamed, and John Hart, feathered bybloemens. 4th, Rev. F. D. Horner; 5th, Mr. J. Wood; 6th, Mr. R. J. Sharpley, Wakefield; 7th, Mr. Geo. Gill, Wakefield; 8th, Mr. H. Travis, Royton. Thirteen stands were put up, and the competition was very keen.

Class III. 6 dissimilar, as above (for 10s. 6d. subscribers only).—1st, Mr. E. H. Schofield, with Sir J. Paxton, flamed, and Charles X., feathered bizarres; Aglaia, flamed, and Heroine, feathered bizarres; William Dobbins, flamed, and Bessie, feathered bybloemens. 2nd, Mr. Hugh Housley, Stockport, with Sir J. Paxton, flamed, and Royal Sovereign, feathered bizarres; Lady Catherine Gordon, flamed, and Mabel, feathered roses; Talisman, flamed, and Mrs. Pickerell, feathered bybloemens. 3rd, Mr. Thos. Baker; 4th, Mr. R. Wolfenden.

Class IV. 3 feathered, 1 of each class.—1st, S. Barlow, Esq., with perfect blooms of General Grant, bizarre; Modesty, rose; and Mr. Jackson, bybloemen. 2nd, Mr. W. Kitchen, with Royal Sovereign, bizarre; Mabel, rose; and Violette Aimable, bybloemen. 3rd, Mr. E. H. Schofield, with Duke of Devonshire, bizarre; Modesty, rose; and Vicar of Radford, bybloemen. 4th, Mr. H. Housley; 5th, Mr. J. Morris; 6th, Mr. H. Travis. In this class there were sixteen stands, and some superb blooms were set up.

Class V. 3 flamed, 1 of each class.—1st, Mr. D. Woolley, with Sir J. Paxton, bizarre; Triomphe Royale, rose; and Chancellor, bybloemen. 2nd, the Rev. F. D. Horner, with William Lea, bizarre; Aglaia, rose; and Duchess of Sutherland, bybloemen. 3rd, Mr. R. J. Sharpley, with Donizetti, bizarre; Aglaia, rose; and Lord Denman, bybloemen. 4th, Mr. J. Thurston. 5th, S. Barlow, Esq. 6th, Mr. H. Housley. There was a keen competition in this class, sixteen stands being exhibited.

Class VI. 2 blooms, 1 feathered and 1 flamed, of any class.—1st, Mr. H. Housley, with Sir J. Paxton, flamed bizarre; and Royal Sovereign, feathered bizarre. 2nd, Mr. R. J. Sharpley, with Napoleon, feathered bizarre; and Lord Denman, flamed bybloemen. 3rd, S. Barlow, Esq., with Sir J. Paxton, flamed bizarre; and William Lea, feathered bizarre. 4th, Mr. D. Woolley. 5th, Mr. J. Morris. 6th, Mr. R. Wolfenden. Seventeen competitors.

Class VII. 2 blooms, as above, for maiden growers only.—1st, Mr. R. Wolfenden, the only exhibitor, with Dr. Hardy, flamed bizarre; and Surpasse Catalque, feathered bizarre. A maiden grower is defined as one who has never won the amount of his subscription at any one show.

Class VIII. Single Blooms.—In this section of the show there was a very large number of flowers staged, and the work of the judges was exceedingly tedious and difficult. *Feathered Bizarres.*—1st, Mr. W. Whittaker, with John Radcliffe. 2nd, Mr. Knowles, Ashton, with Sir J. Paxton. 3rd, Mr. Morris, with Sulphur. 4th, Mr. Woolley, with Sulphur. 5th, Mr. Gill, with Criterion. Then followed, in order of merit, an unnamed flower, Lord Lilford, Captain Ruddock, Field Marshal, and Sir Sidney Smith. *Feathered Roses.*—1st, Mr. Travis, with Heroine. 2nd, Mr. Morris, with Industry. 3rd, Mr. Knowles,

with Heroine. 4th, Mr. Morris, with Aglaia. 5th, S. Barlow, Esq., with Annie McGregor. Mrs. Lea, Mrs. Bright, Mrs. Hindley, Charmer, and Rachel followed in the order of their names. *Feathered Bybloemens.*—1st, Mr. D. Woolley, with King of the Universe. 2nd, Mr. Kitchen, with Adonis. 3rd, Mr. Whittaker, with Mrs. Pickerell. 4th, Mr. Morris, with Mrs. Hepworth. 5th, Mr. Knowles, with Violette Aimable. An unnamed flower, Majestic, Friar Tuck, Seedling, and Beauty of Home followed in order. *Flamed Bizarres.*—1st, Rev. F. D. Horner, with Sir J. Paxton. 2nd, Mr. Whittaker, with the same; 3rd, with Dr. Hardy. 4th, Mr. D. Woolley, with Pilot. 5th, Mr. Wolfenden, with Masterpiece. Then followed, in the order of merit, Cyril, Merit, Storer's No. 4, Excelsior, and Napoleon. *Flamed Roses.*—1st, S. Barlow, Esq., with Aglaia. 2nd, Mr. R. J. Sharpley, with the same. 3rd, Mr. D. Woolley, with Mabel. 4th, Mr. Wood, with Lady C. Grosvenor. 5th, Mr. Travis, with Annie McGregor. Madame St. Amand, Flora Macdonald. Mrs. Lomax, Pretty Jane, and Triomphe Royale followed. *Flamed Bybloemens.*—1st, Mr. H. Housley, with Lord Denman. 2nd, Mr. R. J. Sharpley, with the same. 3rd, Mr. Housley, with Chancellor. 4th, Mr. Woolley, with Chancellor. 5th, Mr. Morris, with Adonis. Then followed Bacchus, Nimbus, Talisman, King of the Universe, and George Edward.

Class IX. Best feathered in the show.—1st, Rev. F. D. Horner, with Heroine, as shown in his winning twelve. *Best flamed in the show.*—1st, Rev. F. D. Horner, with Sir J. Paxton.

BREEDER TULIPS.

The breeder forms of the Tulips—those from which the rectified flowers are obtained, usually form an interesting feature of the show, and they did so on this occasion, being not only numerous, but of high quality.

Class X. 6 dissimilar, 2 of each.—1st, Rev. F. D. Horner, with Sir J. Paxton and William Lea, bizarres; Lady Burdett Coutts, and Parker's Seedling, very fine, roses; Talisman and Alice Gray, bybloemens; 2nd, S. Barlow, Esq., with Sir J. Paxton and Horatio—a very striking rich scarlet, but one that breaks badly—bizarres; No. 28, '62, and Lady Burdett Coutts, roses; Adonis and Eliza Gill, bybloemens. 3rd, Mr. W. Kitchen, with Sir J. Paxton and William Lea, bizarres; Mabel and Industry, roses; Alice Gray and Surpasse le Grand, bybloemens. There were eight collections staged and six prizes awarded.

Class XI. 3 dissimilar, 1 of each class.—1st, Mr. W. Kitchen, with Sir J. Paxton, biz.; Mabel, rose; and Adonis, byb. 2nd, Rev. F. D. Horner, with Sir J. Paxton, biz.; Lady Grosvenor, rose, and Talisman, byb. 3rd, Mr. J. Wood, with Sir J. Paxton, biz.; Mabel, rose; and Surpasse le Grand, byb. 4th, S. Barlow, Esq., with Hepworth's 27A, very rich in colour, biz.; Annie McGregor, rose; and Talisman, byb. There were thirteen stands shown in this class.

Class XII. Single blooms: Bizarres.—1st, S. Barlow, Esq., with Excelsior. 2nd, Mr. Matthew, with Sir J. Paxton. 3rd, Rev. F. D. Horner, with a Seedling. Then followed Excelsior, Richard Yates, Wakefield Seedling, Charlie Flutter, and Willison's King. *Roses.*—1st, S. Barlow, Esq., with Mrs. Barlow, and 2nd with Annie McGregor. 3rd, Rev. F. D. Horner, with Lady C. Grosvenor; followed by Juliet, Mabel, Industry, and Lord Derby. *Bybloemens.*—1st, S. Barlow, Esq., with Glory of Stakehill, remarkably fine. 2nd, Rev. F. D. Horner, with Ashmole's 112. 3rd, S. Barlow, Esq., with William Parkinson. Then followed Alice Gray, Beauty of Litchurch, Adonis, and Talisman.

Class XIII. Best Breeder in the show.—S. Barlow, Esq., with Glory of Stakehill.

The show was held in the new Exhibition House in the Botanical Gardens, the flowers being staged on tables, and set up in glass bottles of Mr. Barlow's design, as represented at p. 115 of our volume for 1882. As soon as the prizes were awarded in all the "pan" or stand classes, the non-placed stands were broken up and the flowers placed in the various classes for single blooms—thus giving them another chance, and this time on their own individual merits, of competing for prizes. It is a question, however, if the exhibition in this form is so pleasing or attractive to the public for whose gratification such shows are, in part at least, got up.

TULIPS IN IRELAND.

At the May Show of the Royal Horticultural Society of Ireland, there were classes for 24 and 12 Rectified Tulips, and for 12 Breeders, and from the report of the show we learn that the following were the varieties exhibited:—

In the class for 24 Tulips the first prize was taken by the Rev. Frederick Tymons, A.M., with Heroine, Merit, Nimbus, Lady Sefton, Adonis, Dr. Hardy, Talisman, Headly's No. 4, Bessie, Annie McGregor, Lord Lilford, Duchess of Sutherland, Sulphur, Her Majesty, William Lea, Charmer, Modesty, Excelsior, Orion, Sir J. Paxton, Storer's No. 119, Music, Kate Connor, Mrs. Wilson.

For a stand of 12 varieties, Rev. F. Tymons was also first with Adonis, Mabel, Bessie, Dr. Hardy, William Wilson, Annie McGregor, Sir J. Paxton, Triomphe Royale, Aglaia, Sulphur, Queen of England, Duchess of Sutherland; 2nd, F. W. Leland, Esq., Drogheda.

For a stand of 12 Breeders, Rev. F. Tymons was again first, with Abe Lincoln, Attraction, Music, Lord F. Cavendish, Excelsior, Queen of England, Annie McGregor, Hepworth's 30,61, Lord Delamere, William Lea, Lea's No. 2, Mabel.

WAKEFIELD TULIP SHOW.

The Wakefield Tulip Show, to which we invited attention last season, has been continued, as we learn from the *Gardeners' Magazine*, for the long period of 48 years. The Show of the present season was held on June 4 and 5, and about a thousand blooms were set up. We are glad to find that the growers of these fine old flowers are increasing in Wakefield and its neighbourhood. The prize-list comprises twelve classes, together with three premium prizes for the best flowers in each section staged in the whole show. The judges' awards were as follows:—

RECTIFIED TULIPS.

Stand of 6 Blooms.—Mr. George Lumb, with Masterpiece, Sir J. Paxton, Aglaia, Aglaia, Grace

Darling, and Lord Denman. 2nd, Mr. George Gill, with Criterion, Sir J. Paxton, Modesty, Aglaia, Majestic, and Lord Denman. 3rd, Mr. Thomas Spurr, with Napoleon, Perfection, Lord Denman, Grace Darling, Aglaia, and Aglaia. 4th, Mr. R. J. Sharpley, with Charles Gill, Napoleon, Industry, Aglaia, and Majestic. 5th, Mr. B. Lumb, with Masterpiece, John Brook, Lord Denman, Majestic, Aglaia, and Aglaia. 6th, Mr. E. Lister, with Sir J. Paxton, Lord Lilford, Grace Darling, Sarah Ann, Industry, and Sarah Headly. 7th, Mr. Jesse Hardwick, with Lord Lilford, Criterion, Maid of Orleans, John Dalton, Mrs. Lea, and Mabel. 8th, Mr. Joe Steele, with Wallace, Merritt, Aglaia, Aglaia, Majestic, and Lord Denman. 9th, Mr. William Mellor, with George Hayward, Sir J. Paxton, Aglaia, Agnes Mellor, George Hardwick, and Lord Denman. 10th, Mr. J. Netherwood, with Masterpiece, Sir J. Paxton, Sylvesta, Seedling, Mrs. Barlow, and Industry. 11th, Mr. Alfred Spurr, with Criterion, Duke of Hamilton, Aglaia, Aglaia, Lady Denman, and Lord Denman.

Single Blooms: Feathered Bizarre.—1st, Mr. G. Gill, with Masterpiece. 2nd and 3rd, Mr. R. J. Sharpley, with Wallace. 4th, Mr. G. Gill, with Criterion. 5th, Mr. J. Hardwick, with Napoleon. 6th, Mr. G. Lumb, with Masterpiece. 7th, Mr. J. Hardwick, with Sir J. Paxton. 8th, Mr. T. Spurr, with John Brook. *Feathered Roses.*—1st, Mr. R. J. Sharpley, with Mrs. Lea; 2nd, with Lady Crewe. 3rd, Mr. G. Gill, with Minerva. 4th, Mr. J. Netherwood, with Rose Mary. 5th, Mr. E. Lester, with Heroine. 6th, Mr. G. Gill, with Aglaia. 7th, Mr. E. Lister, with Aglaia. 8th, Mr. J. Hardwick, with Modesty. *Feathered Bybloemens.*—1st, Mr. R. J. Sharpley, with Adonis; 2nd, with Majestic. 3rd and 4th, Mr. Thomas Spurr, with Grace Darling. 5th, Mr. J. Steele, with Lady Denman; 6th, Mr. J. Hardwick, with Lady Denman. 7th, Mr. G. Lumb, with Grace Darling. 8th, Mr. J. Netherwood, with Vicar of Radford. *Flamed Bizarre.*—1st and 2nd, Mr. R. J. Sharpley; 3rd and 8th, Mr. E. Lister; 4th and 6th, Mr. G. Gill; 5th and 7th, Mr. G. Lumb; all with Sir Joseph Paxton. *Flamed Rose.*—1st and 2nd, Mr. R. J. Sharpley; 3rd, 6th, and 7th, Mr. G. Lumb; 4th and 5th, Mr. T. Spurr; 8th, Mr. J. Netherwood; all with Aglaia. *Flamed Bybloemen.*—1st, Mr. G. Gill, with Lord Denman. 2nd, Mr. R. J. Sharpley, with Lord Denman, and 3rd, with Talisman. 4th and 7th, Mr. G. Lumb, with Lord Denman; 5th and 6th, Mr. T. Spurr, with Lord Denman; 8th, Mr. J. Netherwood, with John Henry.

BREEDER TULIPS.

Stand of 6.—1st, Mr. R. J. Sharpley, with Isabella, Hardwick's Seedling, Seedling, Seedling, Hardwick's, and Seedling. 2nd, Mr. T. Spurr, with Vanhamburg, Duchess of Sutherland, John Brook, Pilot, Mabel, and Mrs. Barlow. 3rd, Mr. G. Gill, with Charles Darwin, Hardwick's Seedling, Mrs. Barlow, Mabel, Ethel, and Hardwick's Seedling. 4th, Mr. Jesse Hardwick, with John Brook, Wilison's King, Mrs. Barlow, Vanhamburg, Hardwick's Seedling, and Miss Boot. 5th, Mr. J. Netherwood, with Nannie Gibson, Mrs. Longbottom, Sir J. Paxton, Lord F. Cavendish, M. E. Fawcett, and Hepworth's Sylvesta. 6th, Mr. G. Lumb, with Mabel, Catherine, and Duchess of Sutherland. 7th, Mr. J. Steele, with Catherine, Industry, John Brook, Vanhamburg, Pilot, and Maid of Orleans. 8th, Mr. E. Lister, with Industry, Annie McGregor, Mrs. Hepworth, Vanhamburg, R. Sharpley, and Sir J. Paxton.

Stand of 3.—1st, Mr. J. Netherwood, with Duchess of Sutherland, Mrs. Jeffrey, and John Brook. 2nd, Mr. J. Hardwick, with Miss Collins, Vanhamburg,

and Willison's King. 3rd, Mr. Alfred Spurr, with Catherine, Lord F. Cavendish, and Orleans. 4th, Mr. T. Spurr, with John Brook, Duchess of Sutherland, and Apollo. 5th, Mr. E. Lister, with Queen of England, Lord F. Cavendish, and Vanhamburg. 6th, Mr. J. Steele, with Catherine, Pilot, and Duchess of Sutherland. 7th, Mr. R. J. Sharpley, with John Brook, Isabella, and Hardwick's Seedling. 8th, Mr. W. Mellor, with Paxton, Industry, and Duchess of Sutherland. 9th, Mr. G. Gill, with Paxton, Mrs. Longbottom, and Ethel. 10th, Mr. Ben Lumb, with Mabel, Willison's King, and Maid of Orleans. 11th, Mr. G. Lumb, with Mabel, Hardwick's Seedling, and Hardwick's Seedling.

Single blooms : Bizarres.—1st, Mr. R. J. Sharpley, with Charles Darwin. 2nd, Mr. J. Hardwick, with John Brook. 3rd, Mr. G. Gill, with William Lea. 4th, Mr. E. Lister, with Willison's King. 5th, Mr. R. J. Sharpley, with Hardwick's Seedling. 6th, Mr. J. Netherwood, with Lord F. Cavendish. 7th, Mr. J. Hardwick, with Dr. Hardy. 8th, Mr. J. Netherwood, with Lord F. Cavendish. *Roses*, 1st, Mr. T. Spurr, with Mabel. 2nd, Mr. J. Hardwick, with Annie McGregor. 3rd, Mr. R. J. Sharpley, with Mabel. 4th, Mr. G. Gill, with Mrs. Longbottom. 5th, Mr. Alfred Spurr, with Catherine. 6th, Mr. G. Gill, with Annie McGregor. 7th, Mr. J. Steele, with Catherine. 8th, Mr. G. Lumb, with Industry. *Byblœmens*, 1st, Mr. T. Spurr, with Vanhamburg. 2nd, Mr. G. Gill, with Maid of Orleans. 3rd, Mr. T. Spurr, with Vanhamburg. 4th, Mr. G. Gill, with Ethel. 5th, Mr. E. Lister, with Duchess of Sutherland. 6th, Mr. J. Netherwood, with M. H. Fawcett. 7th, Mr. J. Steele, with a Seedling. 8th, Mr. G. Lumb, with Miss Nightingale.

The Premier Prizes for the best feathered, flamed, and breeder flowers in the show were taken by Mr. G. Gill for the feathered flower, with Criterion; by Mr. R. J. Sharpley for the flamed flower with Sir Joseph Paxton; and by Mr. R. J. Sharpley for the best breeder with Isabel.—T. M.

SAMUEL BARLOW.*

THE name of Samuel Barlow is one held in great esteem and reverence by Lancashire florists. He is their trusted leader and representative. If any floricultural enterprise is undertaken the aid of Samuel Barlow is invoked, and it is never asked for in vain in a worthy cause. Stakehill House, Castleton, near Manchester, the residence of Mr. Barlow, is situated about eight miles from Manchester on the Rochdale road, and immediately contiguous to Oldham, and is a kind of pilgrimage place for florists, and there is always something to be seen calculated to excite wonder and impart delight. Stakehill may be taken as the centre of an

active floricultural circle; it is near to Middleton, that home of florists, with its environment of floral shrines. Hundreds of men living quiet, unobtrusive lives have grown florists' flowers with great success, obtained honours, raised meritorious varieties, and gone down to their graves honoured and lamented, their actions blossoming sweetly in their dust, their good deeds remembered and imitated by their successors.

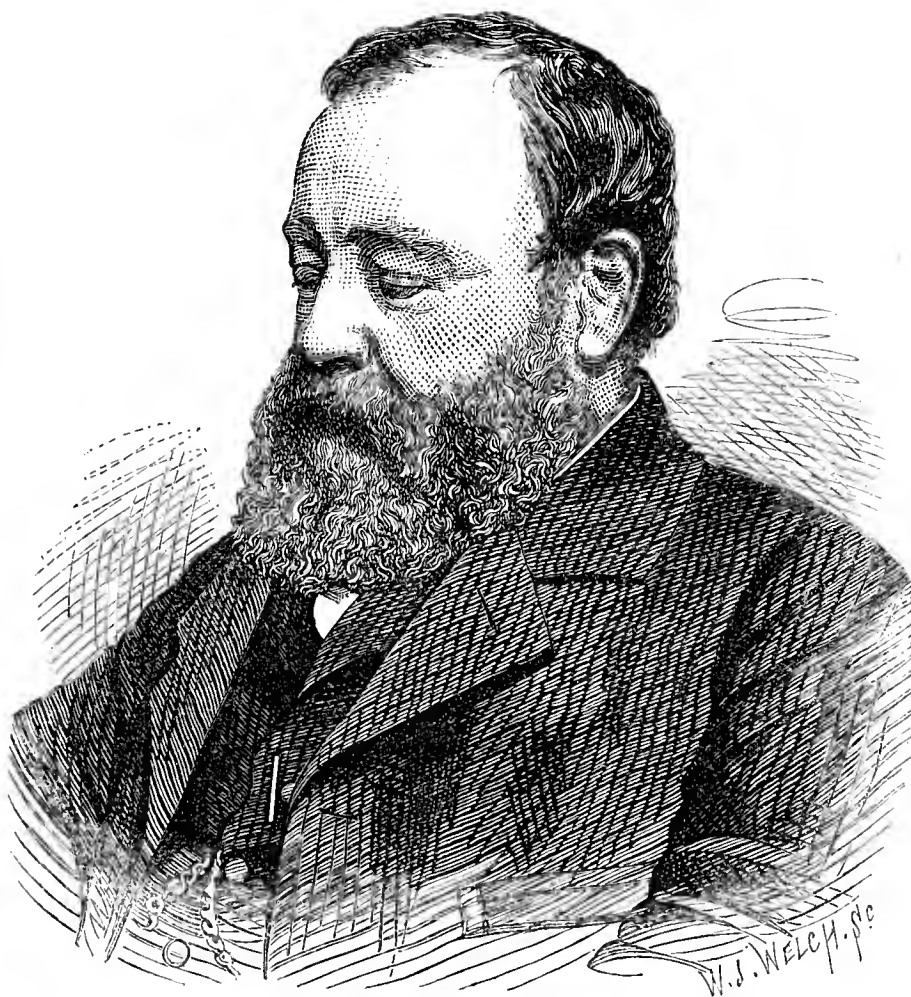
Mr. Barlow, whose portrait will be found on page 101, was born in 1825, and received the rudiments of that education, for the completion of which he is so much indebted to his own perseverance and natural love of study, at the village school of Woodhouses—the original of Ben Brierley's "Model Village," and near to Daisy Nook. At an early age he commenced to work in the bleach works of Messrs. Otho Hulme and Sons, Medlock Vale, his father being at that time manager. Working all day, and spending his evenings at the night class at Woodhouses, the boy was assiduously preparing himself for the busy and useful career which was in store for him. To the character of his father much of that which most honourably characterises the son, as well as his ardent love of plants, and especially of florists' flowers, is unquestionably due. The father was one of that band of earnest and enthusiastic working-men botanists who have done so much to create a love of beauty and sweetness in the too frequently unlovely life of the Lancashire manufacturing districts. The elder Mr. Barlow was the friend of Hobson, Crowther, Mellor, Buxton, Horsfield, and a host of other botanists, whose names and labours are still held in honourable remembrance.

The floricultural tastes received in hereditary succession from his father found expression in early life. About 1832, when Mr. Barlow was seven years of age, his father gave him and his brother a shilling's worth of seeds of mixed annuals, and allotted them a bed to sow them on. These were the first plants he was able to really call his own, and we have heard him say he will never forget the interest and delight he had in that bed—the hours he spent over it, and the joy he experienced when he discovered something new and before unknown to him. He remembers with un-

* Associated with the reports of the Royal National and other Tulip Shows, we are happy to be able, thanks to the editor of the *Gardeners' Chronicle*, to give the accompanying portrait and memoir of our excellent friend, S. Barlow, Esq., the acknowledged leader of the Tulip fancy, and a most successful Tulip grower.

dimmed vividness many of the subjects that bloomed on the bed, among them six varieties of Lupins and some exquisitely beautiful "Muslin" Poppies. As far back as 1837, Mr. Barlow possessed a very fine collection of fancy Primroses, Polyanthus, Auriculas, and Pansies, and also in this year he fruited twenty-four choice selected trees of the best kinds of prize Gooseberries. In 1839, the chief feature of the garden was the Pansies raised and grown by his brother and himself; they were nearly all seedlings raised from George IV., Broom Girl, &c., the best kinds

became the manager of the bleach works, at Stakehill, of which Mr. Barlow is now one of the partners, and took up his abode there in 1847. Here the subject of our sketch found congenial employment, and here he has resided ever since, making Stakehill a household word with lovers of flowers all over the country. On the death of his father in 1855, Mr. Barlow became sole manager of the bleach works; in 1861, in conjunction with partners, he became the proprietor of the works, the business of which has ever since been conducted under the style of Samuel Barlow & Co.



SAMUEL BARLOW.

of that day, and also included seed from selected seedlings. "They were," says Mr. Barlow, "grown in terraces on a bank in the garden sloping to the south, and flourished amazingly, each forming a large clump. I have never seen the effect equalled since. It had the appearance of gigantic flights of steps composed of large clumps of Pansies, running into each other and forming a solid mass on each terrace."

In September, 1839, the family removed from Medlock Vale, and went to Salford, but was deprived of a garden until the father

It was in 1848, a year after taking up his residence at Stakehill, that Mr. Barlow exhibited flowers for the first time. Some of his earliest triumphs were won with Gooseberries; while Tulips, Polyanthus, Ranunculus, &c., were leading flowers with him. In the thirty-five years which have intervened, the gardens of Stakehill House have been considerably extended, the dwelling-house almost entirely rebuilt, and many a new floral interest created and nurtured. A local chronicler states that "Stakehill House, at the present day, is simply the most perfect example of the modes

by which high culture and exquisite taste can be associated in the closest manner with the requirements of manufacturing industry. Mr. Ruskin, and some of his followers, who waste time and energy by preaching up a perfectly Utopian crusade against 'devil-driven machinery' as the enemy of natural beauty and truth, should go to Stakehill to learn how the two apparently hostile interests can, by patience, perseverance, and skill, be made to live peaceably together. The house and gardens stand some 500 feet above the sea-level, under the shadow of the huge chimney-stalk belonging to the Stakehill works, and in a district where the atmosphere is so fully charged with elements injurious to vegetable life that the surrounding country is almost denuded of trees (something like three-score of tall chimney-stalks can be counted from the Stakehill grounds), and to step out of this desert into the floricultural and artistic paradise which has been created by Mr. Barlow is a pleasure which is enhanced considerably by the force of contrast. Here science and observation have succeeded in clothing the grounds with trees and shrubs which defy the evil machinations of the chemical manufacturers; and here flowers come to perfection which, at the Manchester horticultural exhibitions, successfully defy the competition of rivals who have apparently everything in their favour, so far as situation, climate, and atmosphere are concerned. At one point a group of rare varieties of some favourite flower, such as can scarcely be matched from the Tweed to the Land's End, is observed by the visitor, while, at another, he notices a huge quantity of virgin soil which has been brought by rail and waggon from the Great Orme's Head, so that some of the floral favourites at Stakehill may be supplied with a kinder nursing than Nature, allied with the chemical manufacturers, has vouchsafed to provide."

Who shall venture to enumerate all the subjects grown at Stakehill? Vineries, Orchids, choice stove plants, and such-like illustrate the higher walks of gardening. Begonias, Pelargoniums, and other soft-wooded plants are here in choice variety. In the cold houses and open ground there is a marvellous wealth of subjects; Auriculas,

Polyanthus, indeed Primulas of all kinds, are seen in abundance; hardy hybrid Rhododendrons, Chrysanthemums, Lilliums, Hellebores, and many things too numerous to mention, are tenderly cared for. Here is to be seen one of the, perhaps the choicest collection of Tulips in the country, and a collection of florists' Ranunculus, unfortunately very rarely met with now-a-days, bloom here during summer. That early love, the Pansy, is in profusion—everything that is alluring to the eye is welcome, if only space can be found for it. Not a few things are grown under great difficulties, but pluck and enthusiasm triumph over them, and score some measure of success.

As a raiser Mr. Barlow has produced some grand varieties of Tulips and gold-laced Polyanthus. He has at the present time some 500 seedling Auriculas, saved from carefully fertilised flowers, and they are showing signs of the highest breeding. Three of them took high honours at the Auricula show at South Kensington on April 24th. At no season of the year is Stakehill without some striking object of floral beauty, pleasing to the eye and gladdening to the heart of man.

And may we not in this relation say something about the art museum which adorns Mr. Barlow's elegant and comfortable home? The walls are covered with pictures and drawings, including a large number of examples of the work of the "Manchester School," of the great French artists whose genius constituted in some degree the source from which the members of that school have drawn their inspiration, and especially of one great living English master, whose power in the region of poetic art has seldom been equalled. Almost every corner in the house testifies to the extent to which Mr. Barlow has proved himself the generous and discriminating friend of art and artists. Cabinets in the different reception rooms overflowing into the corridors, are fitted with a wealth of ceramic curiosities, which would bring delight to the heart of the most exigent china-maniac.

It remains to be said that Mr. Barlow is an energetic county magistrate, a member of the Council of the Manchester Botanical and Horticultural Society, the President of the Manchester Arts Club, is on the Council of the Manchester Academy, and fills other offices with credit to himself and benefit to others. Last, but not least, he is an earnest assistant in scores of useful and philanthropic public movements. They whose privilege it is to enjoy his hospitality at Stakehill House know that he is one of the most generous of hosts as well as the most genial and entertaining of social companions.

CHOICE TULIPS.

IT must not be supposed that because we hear less of the Florist's Tulip than we did some years ago, that there is a lack of interest in the flower, or that there is any pause in the production of new varieties. Though the fine and gorgeous Tulip is but little grown in the south, it has many admirers in the north, and many seedlings are raised. It is my intention to give descriptions of a few of these by way of keeping up the record of floricultural progress. It is at the Royal National Tulip Society's annual show at Manchester that one looks for the appearance of novelties. If any one will refer to the list of flowers shown at the exhibitions of this Society twenty years ago, he will see how much of novelty has put in appearance since then.

At the Manchester show we were much struck with the following among the Bizarre flowers:—Feathered: *Garibaldi*, rich golden ground, very handsomely feathered with dark; a fine variety which came from an *Adonis* breeder; perfect in form and very attractive. *General Grant*, pure golden yellow ground, finely feathered with deep reddish bronze; very fine and distinct. *William Wilson*, a fine break from *Masterpiece*, purer in the ground, and deeper in the feather. *Commander*, a grandly formed flower, deep in colour, pure at the base, and finely feathered with rich dark. The following sorts in this section were in very fine condition:—*Masterpiece*, *Magnum Bonum*, *Sulphur*, *George Hayward*, *Lord Raglan*, and *Sir J. Paxton*. Of Flamed Bizarres: *Excelsior*, pure in the ground, handsome in shape, and finely marked in beam and feather; this is thought to have come from *Masterpiece*. *Storer's No. 4*, quite a new break, beautifully marked, and very solid in the beam. In addition:—*Ajax*, very fine indeed this year, *Orion*, and *Sir J. Paxton* were all very good indeed.

Of Roses, among the feathered flowers the following were very conspicuous:—*Industry*, pure in the ground, of exquisite form, and beautifully feathered with rosy - scarlet. *Modesty*, with all the excellent qualities of the foregoing, but most elegantly feathered with pale scarlet. And *Nanny Gibson*, very rich in colour, quite a bright scarlet, pure in the ground, very fine and striking. Other

good feathered roses were *Heroine*, old *Aglaia*, and *Mrs. Lea*. Then of flamed Roses, *Lady Sefton*, lovely in colour and pure in the ground, as well as fine in form; and also *Mabel*, very pretty and striking, solid in the beam and bright in colour, were highly attractive. *Annie McGregor*, *Triomphe Royale*, *Aglaia*, and *Rose Celestial* were also very good.

Byblœmens were generally in very good form, and *Mrs. Jackson* was superbly beautiful, very pure, fine in shape, and exquisitely feathered with glossy black; perfect in all respects. *Bessie* was a little undersized, but pure and beautifully feathered. *Mrs. Cooper*, pure in the ground, and handsomely feathered with dark. *Mrs. Bentley*, a distinct variety, very scarce, beautifully finished. Other fine flowers were *Alice Gray*, and old *Violet Aimable*. There was nothing new, strictly speaking, in the way of flamed byblœmens, but *Talisman*, *Duchess of Sutherland*, *Adonis*, *Friar Tuck*, and *Chancellor*, were all very fine.

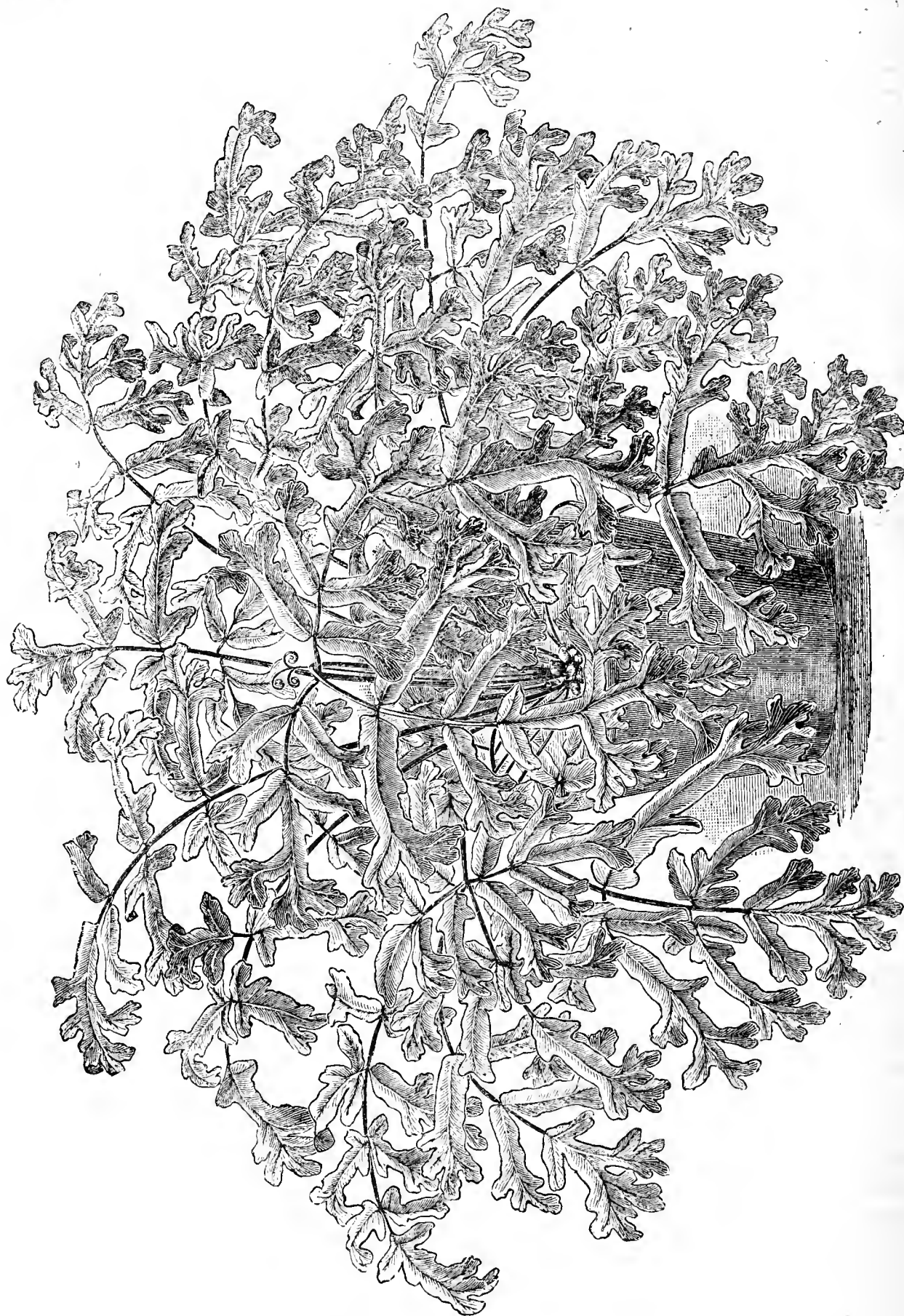
The Breeder Tulips were especially fine, and they possess a superb beauty peculiarly their own. Of bizarre breeders the following were in very fine form:—*Abe Lincoln*, *Ashmole's Seedling*, *Excelsior*, *Horatio*, *Sir J. Paxton*, *Storer's No. 4*, and *William Lea*. Of Rose breeders *Annie McGregor*, *Lady C. Grosvenor*, *Mrs. Barlow*, *Miss Burdett Coutts*, and *Modesty*. Of byblœmen breeders, *Glory of Stakehill*, *Adonis*, *Talisman*, and *Elizabeth Gill*.—R. DEAN.

OSMUNDA JAPONICA
CORYMBIFERA.

THE typical *Osmunda japonica* of Thunberg (*Fl. Jap.*, 330), the *O. regalis biformis* of Benth in the *Flora of Hong Kong*, differs from our native Royal Fern, *Osmunda regalis*, in producing, like several other species of the genus, separate fertile fronds—that is, fronds without any leafy pinnules, but consisting wholly of pinnules which are arrested in their development, and entirely covered with sori. In *O. regalis*, on the other hand, the lower pinnae of all the fronds bear leafy pinnules, and the upper portions only of such as are fertile become arrested and soriferous. Those Ferns which have the former mode of development, and produce sterile and fertile fronds distinct from

each other, are called dimorphous; and hence the *O. japonica* differs from *O. regalis* in producing dimorphous fronds. The same form is met with in the Himalayas, and is the *O. speciosa* of Wallich.

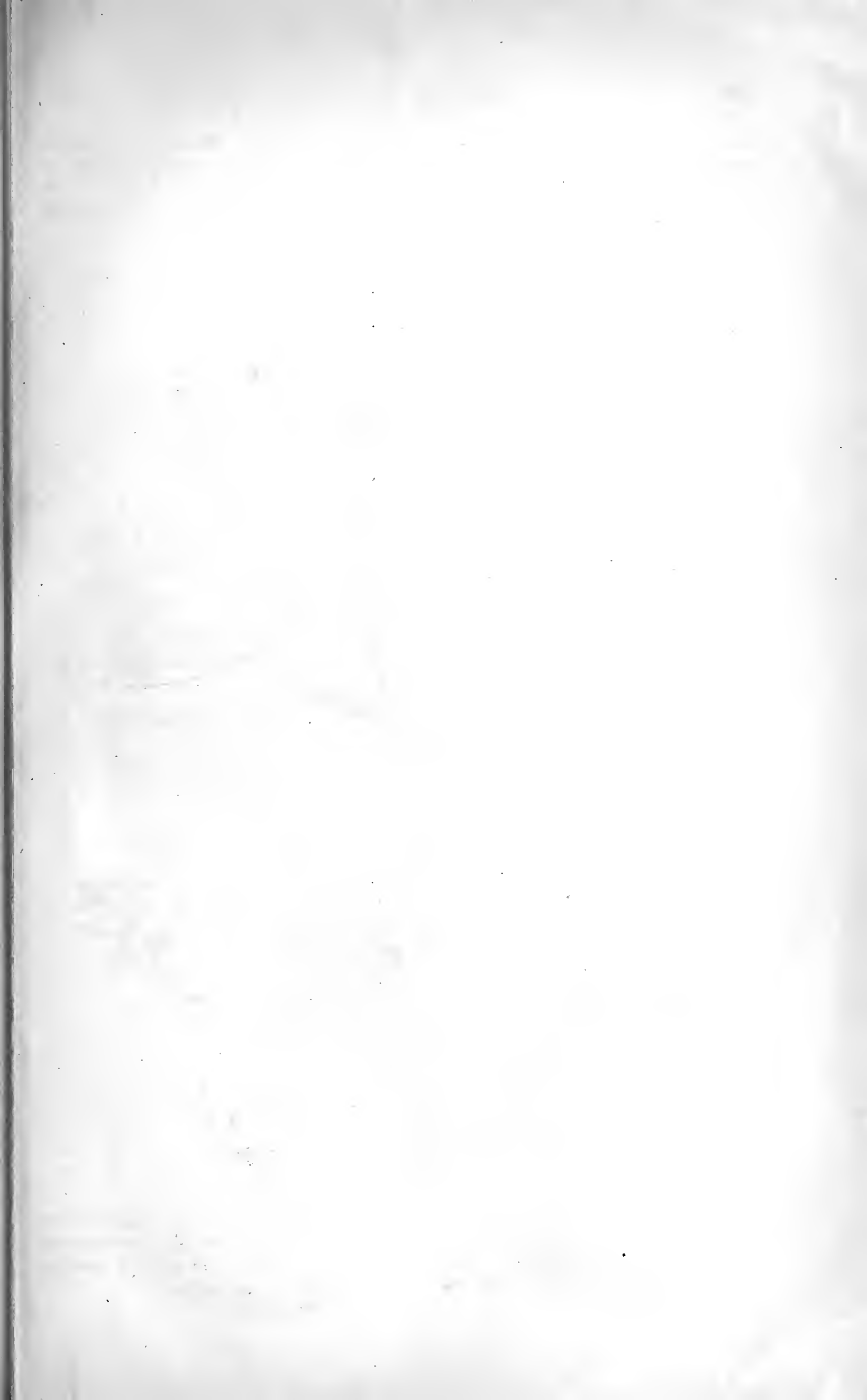
It has the apices of fronds, pinnæ, and pinnales multifidly cut, the segments obtuse, and spreading in a corymbiform manner. It is, moreover, a very interesting Fern from the



OSMUNDA JAPONICA CORYMBIFERA.

Of this Japanese Fern the *Osmunda japonica corymbifera* is a very elegant variety recently introduced by Messrs. Veitch & Sons, of Chelsea, through their collector, Mr. Maries.

point of view of reproduction, inasmuch as it is one of those forms having multifid fronds which are reproduced in the same character when raised from the spores.





To what size this elegant variety may ultimately attain we do not know, for the plant was imported in a very weak condition, and was for some time a mere nursling. It is, no doubt, bipinnate, like the type, but the most developed fronds we have seen were about 10 to 12 inches in height, and triternate in development—that is to say, the stalked apical portion has produced two side pinnae, and the two lateral branches (pinnae) have each produced a terminal and two lateral sessile lobes or pinnules; in each case all three of the lobes end in a flat spreading tuft of bluntish divaricate segments. The veins are free as in the type, and usually about twice forked.

According to the observations of Mr. Maries this plant very rarely produces fertile fronds in Japan: he had never met with it in a fertile state. Messrs. Veitch's specimen, however, produced one, under Mr. Schneider's management, and a crop of corymbiferous seedlings has been the result. The fertile frond now before us has a bare stalk of about 3 inches long, and a bipinnate head of fertile divisions, measuring about $\frac{6}{8}$ inch in both directions, the segments being multifidly divided—a perfect miniature bipinnate frond, with multifidly divided pinnules, which had been covered with spore-cases.

As a distinct crested hardy Fern this *Osmunda* must be admitted to the first rank. The illustration, for which we are indebted to Messrs. Veitch & Sons, gives a good idea of its general character. It has already won First-class Certificates at the exhibitions both of the Royal Horticultural and Royal Botanic Societies, and met with well-deserved admiration on all hands.—T. MOORE.

THE HUMBOLDT NECTARINE.

[PLATE 590.]

IN the early part of September last, Mr. W. Miller, of Combe Abbey Gardens, wrote —“I am very pleased with the doings of a little Humboldt Nectarine tree on an outdoor wall here,” at the same time enclosing the remarks printed at p. 147 of our last volume. Subsequently, on September 25, when ripe, Mr. Miller kindly sent samples of the fruit, from which our drawing and the following description were made:—

Glands of the leaves reniform. *Fruit* full

medium size, about $6\frac{1}{2}$ inches in circumference, nearly round, the side indented with a shallow suture, and the apex having a very small indistinct point. *Skin* rich Indian yellow in the shade, becoming dark dull crimson where exposed, and deepening to a blackish-purple where most so, the surface freckled over with pale dots, but most conspicuously so about the apex where the dots are larger. *Flesh* deep orange yellow, parting freely from the stone, close to which it is slightly tinged with red, juicy and tender, so as to be quite melting, and with a rich and pleasant flavour. The variety, which is described as having been raised from the Pine-apple Nectarine, bears large flowers. We add the following remarks, with which we have been favoured by Mr. Miller:—

The figure of the Humboldt Nectarine I consider a very excellent representation. From further experience I can substantiate everything I wrote in its praise in the *POMOLOGIST* (p. 147, 1882). It blossomed freely this spring, and luckily I had placed before it three or four sash-lights, leaning against the wall. These protected the trees from frost, and of course facilitated the setting. The ends were closed only by a bit of tiffany, which could easily be moved aside once or twice a day when the tree was syringed with clear water, and sometimes with tobacco water, which kept the foliage healthy and clear of aphids.

The tree is now free of glass, in perfect, and I should also say in robust health. It is carrying sixty very fine promising fruits, which will come on as a valuable succession to those in our fourth house; some of these fruits now measure $4\frac{3}{4}$ inches in circumference, *i.e.*, measured the reverse of from base to apex.

Of the *Lord Napier* Nectarine we have two trees on the same wall, treated exactly in the same way as the Humboldt, and I am pleased to be able to give an equally favourable account of them. This is, I think, one of the grandest Nectarines ever sent out. In our early house we have had both this year and last some extraordinarily large and fine fruit. This Nectarine is truly the gardener's friend. As an out-door Nectarine I will this year be able to test it, and let you have my experience. [Please do.]

From the blooming of the Apricot down to that of the Apple we have had a succession of wave after wave of either frost or cold in some form, which has left us—not altogether fruitless, but in a very different position even as regards Apples, to what we were a short time ago led to expect. There is a saying that we should never “holloa before we are out of the wood.” As regards fruit prospects I feel some of us are at times a little bit guilty of premature anticipations.

Another Nectarine, the *Prince of Wales*, we have tried in our third house, but after three years trial I am unable to form any good opinion of the Prince in this form. He is shy to set, and when even in a few cases this has been effected and swelling takes place, he withers and drops off; when further advanced withering and splitting of stone continues, and so this character follows up even to the time of the ripening of the fruit. The tree itself is in perfect health, and as a splendid specimen of training is one of the finest in our collection.—WM. MILLER, *Combe Abbey Gardens*, June 18, 1883.

DWARF GERMAN SCABIOUS FOR CUTTING.

EVERY gardener who has to provide a quantity of cut flowers should grow a bed of these useful plants, for they yield a vast supply of blossoms, double, durable, and of many pleasing colours. Plants raised from seeds in July and August, planted out, will yield an abundance of flowers through the summer, and up to the time that frost and fog end their floral service for the season. And a supply should also be grown in pots from seeds sown in July, to flower in early spring in a vinery or greenhouse, after wintering them in a frame. But the latter require to be grown on somewhat rapidly, so as to have the plants of good size by Christmas.

The plants should be placed singly in large 60 pots, and shifted until they are in 32 sized pots, keeping them clean and healthy, and especially stocky and bushy. They must be well looked after in the matter of watering. These plants would flower all the winter if they had the assistance of a little heat, and the act of cutting causes the plants to break out into fresh growths that produce flowers.

I saw some plants in pots a few days ago

that occupied a vinery, and they were bearing beautiful flowers, far finer than can be had from the open air, charming as they are, in July and August, and the flowers colour grandly under glass. There are about eight distinct varieties that will well repay cultivation, and they are all very fine. Perhaps the best thing would be to obtain one of the Continental collections containing eight or ten varieties, and the grower would be pretty certain to get all he could desire.

A good free soil, rather light and fairly rich should be used, and the pots pretty well drained.—R. DEAN, *Ealing*.

MAIZE TO MATURITY.

(Concluded from p. 71.)

THE result of crossing different varieties is very interesting and highly variable. Forms and colours of the grain are readily mingled, and often very curiously. For instance, in crossing a large round corn with a very much wrinkled variety, known, I think, in America as “Sugar Corn,” the cross has appeared, not in a uniform blending of the parental forms, but side by side the grains have elected to take purely after the one or the other, and some are perfectly round, while others are perfectly wrinkled, and all equally vital. Crossing these again with a variety of variegated grains, the colours are imparted more or less over the round and the wrinkled seed.

I should like to record here a curious difference that I think I have marked between obtaining a cross in the size and form of grains, and between a cross in colours. *Zea gracilis* is a yellow variety of exceedingly small grain, no larger than split pearl barley. The plant, however, grows tall, and produces a large number of very pretty golden heads. I was anxious to keep it true, but having no pollen of its own ready, I had to use some from a large yellow. No effect was produced from this upon the size of the grain that then ripened; but of course the plants raised from that seed were evidently cross-bred. But when I have crossed for colour's sake, and fertilised a pure self variety—say white, yellow, or red—with pollen from a variegated sort, or grain of different colour, I have noticed the cross in the current year's seed; the pollen seems to have influence over the colours

of the forming corn, and of course upon the character of the resulting seedlings. To be the more sure of this, I grew for the purpose pure yellow, and white imported seed, which I believe is kept strictly true, and whenever, and only when I have fertilised the ears from it with pollen from varieties of another colour, I have found the ears show the male parentage in colour in the current year. This influence of the pollen, so direct upon the colour and not upon the size of the seed it helps to form, seems a curious thing. The little umbilical mark is visible on each seed where the pistil has been in direct contact with the husk or "bran" of the grain, and it seems as though this skin were very sensitive to impressions of colour. Leaf variegation, very constant in the striped Japanese variety, but a feature often but faintly transmissible by seed, I have found not transferrable on the male side to the green foliage of other varieties.

There is a very curious species of Maize named *Zea capsularis*, in which each grain on the ear is wrapped up in a stiff filbert-like husk of its own. I do not know of what agricultural value it may be, for it seems proof against any kind of threshing machine. In crossing this with more civilised varieties, I obtained it with scarlet instead of yellow grains within the capsules, while some of the seed produced ears half hidden in the curious husks. I have grown numberless pretty ears of all shades and tints and mixtures. The small grained, variegated seeds of what is known as "Pop Corn" have helped greatly in colours, which I have transmitted to the large corn sorts with many curious effects.

Among them have been soft rose and pink tints, dark and delicate blues, purples, blacks, and crimsons, curious browns and fawns, mossy agate, and mottled grains of different colours, roans and olive shades; and from, I suppose, a mixture of yellow and blue shades, some that are really greens. These are most beautiful and decided at harvest time; but some of the rose and green tints dry a duller colour, which, however, revives a good deal if the grain be wetted and swollen.

I may just say that for fulness and regularity of the grain, my specimen heads will bear comparison with the imported heads, which are also generally picked ones.

One amusing memory comes to my recollection here. Some years ago a correspondent wrote to say he also had been growing Maize a long time in England, and considered there was a great deal more male blossom produced than was needful to fertilise the ears, and would I join him in systematically mutilating the male heads, so as to impress the fact upon the plant, and induce it to be less prodigal of pollen. I could not think there is ever any wasted energy in Nature, for there are untoward times in which everything that seems to excess is but a safe sufficiency. I did not believe it would answer.

The sheep in the fields that for generations have had their joyful tails cut short in early lambhood, nevertheless do produce long-tailed lambs again; and I felt quite sure that the Maize plant—and that wisely—would heed our interference at least as little.—F. D. HORNER, *Kirkby Malzeard, Ripon.*

REGISTER OF NOVELTIES.

NEW PLANTS.

ACER INSIGNE, *Boiss. et Buhse (Bot. Mag., t. 6697)*.—"One of the handsomest species of the genus in cultivation," and according to Van Volxem one of the hardest; being a late grower it does not get nipped by spring frosts. It is a tree with dark brown branches, dark red bud scales, and palmately divided leaves 5—6 inches across of a beautiful pale green, the small green flowers forming a terminal panicle; native of Persia; Kew and Dr. Masters.

BOMAREA PATACOCENSIS, *Herb. (Bot. Mag., t. 6692)*.—A noble Amaryllidaceous climber, growing to a considerable height, with purplish-brown pubescent stems, and sublanceolate leaves. The subumbellate inflorescence bears numerous splendid scarlet flowers which as figured have much resemblance to those of *Cantua dependens*, and are 2—2½ inches long. It has been noticed under the name of *B. conferta*. It grows in wooded localities in the temperate regions of the Andes of Ecuador, at an elevation of 8,000 feet. Introduced by Shuttleworth, Carder, & Co., and flowered in October, 1882; Kew.

CATTLEYA NOBILIOR, *Reich. f. (L'illust. Hort., t. 485)*.—A remarkably fine *Cattleya* allied closely to *C. Walkeriana*, but separated by Rehb. on account of its larger size and its dissimilar lip, the lateral lobes of which are larger enclosing the column, and the middle lobe of which is reniform emarginate. It has short oblong stems, oblong leaves, and 2—3 flowered peduncles, bearing very large spreading flowers of a bright magenta rose colour, the lip white on the disk and throat, with the front lobe edged and tipped with rose. The flowers are very large for so dwarf a plant. Introduced from Brazil by the Compagnie Continentale d'Horticulture; 1st-class Certificate R.H.S., May 22, M. Linden; R.B.S., June 13, J. T. Peacock.

CLERODENDRON MACROSIPHON, *Hook. fl. (Bot. Mag., t. 6695)*.—A remarkably distinct stove shrub, from Zanzibar, of erect habit, with elliptic-oblancoate deeply toothed acuminate leaves 2—3 inches long, and small terminal cymes of white flowers

which are remarkable for their long tube, which is 4 inches or upwards in length and very slender, and for the one-sided character of the five-lobed limb; the stems which are reddish-purple project from 2 to 2½ inches beyond the corolla. The roundish deflected buds attached to the end of the long slender flower tube have a peculiar appearance; flowers in May; Kew.

HYDRANGÆA HORTENSIA ROSEA, *Hort. Veitch*.—A superb decorative plant, one of the finest which have appeared during the season. It is of the usual neat bushy habit, with ovate toothed leaves, and medium-sized globular heads of large flowers, which are of a brilliant deep rose-pink, recalling the colour of *Christine Pelargonium*, and highly attractive; 1st-class Certificate R.H.S., June 12; R.B.S., June 13; introduced from Japan; Veitch & Sons.

IBERIS GIBALTARICA HYBRIDA, *Hort.*—A hybrid raised between *I. Tenoriana* and *I. gibraltarica* by the late Rev. J. G. Nelson. The plant is of close compact cushion-like growth, forming a multitude of shoots each of which flowers at the tip; the colour of the flowers is pale pinkish lilac, but varying a little in tint when raised from seed. A first-rate plant for rockwork and the hardy border; 1st-class Certificate R.H.S., May 22; R. Dean.

LYSIONOTUS TERNIFOLIA, *Wallich (Flore des Serres)* (tt. 2458—59).—A beautiful dwarf stove perennial belonging to the *Cyrtandraceæ*. It has short erect stems; opposite or more frequently ternate leaves, which are lanceolate-oblong, acute and serrate; and numerous flowers in long-stalked axillary cymes, of a pleasing soft lilac colour ornamented with two lemon-tinted ridges in the throat; they are suggestive of those of a *Streptocarpus*, tubular, the tube narrowed at the base ventricose beneath, 1¼ inch long, with an oblique mouth consisting of an upper lip of two, and a lower lip of three ovate segments; a native of India; L. Van Houtte.

MIMULUS RADICANS, *Hook. fil.*—A charming little species with a creeping and rooting stem and short leafy branches, the leaves small stalked close set spreading, obovate obtuse, hairy, of a bronzy green, and the flowers, one or two on a peduncle, freely produced, large by comparison with the foliage, the two-lobed upper lip purple, and the three-lobed lower one white with a dash of yellow on the palate; it is a very distinct and pleasing species of carpeting habit, from the mountains of New Zealand, and said to be quite hardy; 1st-class Certificate R.H.S., June 12; R.B.S., June 13; Veitch & Sons.

NEPENTHES EXCELSIOR, *Hort. Williams*.—One of the new hybrid pitcher-plants now becoming so plentiful, and so valuable on account of their free-growing free pitcher qualities. The present is bred between *N. Rafflesiana* and *N. Hookeriana*, and resembles the former in the character of the pitchers, which are of large size, measuring 9 inches in depth, richly mottled with purple-red and chocolate-brown on a light green ground. They are oblong in form, elegantly rounded at the base, and freely produced; 1st-class Certificate R.B.S., June 13; B. S. Williams.

PHALÆNOPSIS SANDERIANA, *Rehb. f. (Gard. Chron., N. S., xix., 657)*.—According to Prof. Reichenbach this is "the finest *Phalænopsis* imaginable." It has an aspect intermediate between that of *P. amabilis* and *P. Schilleriana*. The plants have somewhat flattened roots, elongate oblong green or mottled leaves, and roundish flowers 4 inches in diameter, the sepals and petals varying in different plants from whitish-rose to rose-purple, or sometimes with a whitish-ochrey hue; the lip is white stained with yellow and marked with cinnamon or purple stripes, the tendrils assume an anchor-like

form as in *P. Schilleriana*, and the callus is almost hippocrepiform with a blunt outward angle on each side, a narrower ascending emarginate arm being placed over it. Of Eastern origin like the rest of the family, introduced by Messrs. F. Sander & Co.; Sir N. M. de Rothschild.

RHODODENDRON DALHOUSIÆ VICTORIANUM, *Cuvelier (Flore des Serres, tt. 2466—7)*.—A very fine hybrid raised by M. Cuvelier, of Ghent, between *R. Dalhousiæ* and *R. Nuttallii*. The plant is distinguished from the first by its larger foliage, while it retains its facility of flowering. The flowers are very fragrant and very large, in clusters of 5—6 together, forming a bouquet about 10 inches in diameter; they are yellowish when they open, and become creamy-white when fully blown, the base of the tube deepening to a beautiful yellow; L. Van Houtte.

SARCOPODIUM DEAREI.—A distinct Indian epiphyte belonging to that section of *Bolbophyllum*, which has been separated by some botanists under the name *Sarcopodium*. It is in the way of *S. Lobbii* but distinct; the flowers are large and of a tawny or buff yellow with purple tracings; the lip is remarkably versatile. India; Lt.-Col. Deare.

NEW FLOWERS.

AZALEA.—*Dr. Hermann Weigel*, a double-flowered variety of the *Indica* group, the colour rich rosy purple, very fine and effective, and as is usual with *Azaleas*, very free; 1st-class Certificate R.H.S., May 22; C. Turner.

BEGONIAS (TUBEROUS-ROOTED).—*Dr. Duke*, one of the fine double varieties recently raised; the flowers are very large, of a brilliant cherry crimson colour, and fully double; remarkable for the great size of the blossoms; 1st-class Certificate R.H.S., May 22; J. Laing & Co. *Prince of Wales*, a variety producing very large and fully double blossoms of a bright crimson colour; the flowers very broad and massive; 1st-class Certificate R.H.S., May 22; J. Laing & Co.

CARNATION (PERPETUAL).—*Field Marshal*, a variety of vigorous growth, very free, the flowers of fine form, full and of a bright scarlet colour; 1st-class Certificate R.H.S., May 22; C. Turner.

LILIUM LONGIFOLIUM VAR., under the name of the *Easter Lily* of Bermuda, a fine white Lily was shown. The stem is five feet or so in height, bearing large pure waxy white flowers eight to nine inches in length; 1st-class Certificate R.H.S., June 12; G. F. Wilson.

PELARGONIUM (DECORATIVE).—*Fanny*, delicate pink, with slight crimson blotches on the top petals; flowers much fringed; very pretty and distinct; good habit; 1st-class Certificate Pelargonium Society and R.H.S., June 12; J. & J. Hayes. *Formosa*, orange crimson, with slight dark blotch on the upper petals, white throat, and wire margin of white all round the flowers; 1st-class Certificate R.H.S., June 12; J. & J. Hayes. *Garibaldi*, rich deep crimson red, with dark blotch on the top petals, all of which are much fringed; very showy and attractive; 1st-class Certificate Pelargonium Society, June 12; J. & J. Hayes.

PELARGONIUM (IVY-LEAF).—*Dr. Masters*, rich magenta carmine; very fine in colour, pip, and truss; the leaves of peculiar shape, often reniform; 1st-class Certificate R.H.S., June 12; J. George. *Future Fame*, one of the charming hybrid varieties which put in appearance from time to time. It is of moderate growth, and bears large trusses of flowers of an Amaranth-purple colour of large size, and fine shape; J. George.

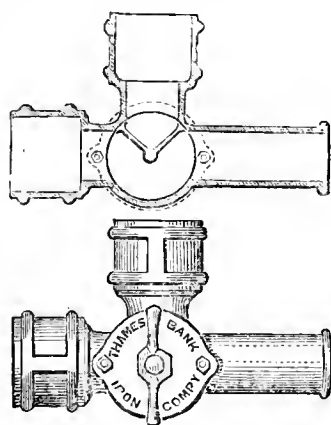
ROSE (TEA): *Princess of Wales*. A superb Tea Rose, one of the pedigree series, a seedling from Adam crossed with *Elise Suavage*. The flowers are

large, fragrant, full, globular, and stout in texture, the margins of the petals are reflexed, the colour yellow here and there passing to a creamy tint, and more or less suffused or tinted with rose. It is a handsome and desirable variety in its section; 1st-class Certificate R.H.S., June 12.—H. Bennett.

TROPÆOLUM (COMPACTUM). *Lustrous*: a dwarf-growing form, with dark bronzy green foliage, and very finely formed flowers of a deep scarlet colour; very fine and effective, and remarkably free; 1st-class Certificate, R.H.S., June 12.—R. Dean.

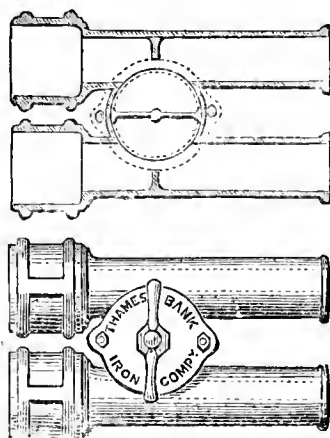
NEW APPLIANCES.

The **PATENT RELIANCE ROTARY VALVE** of the Thames Bank Iron Co. successfully passed the scrutiny of the judges at the recent show of implements, &c., at South Kensington, and gained a Certificate of Merit. We were hence led to expect there was something in it, and on examination we find that it is a very useful invention, as the annexed figures show. It will be seen that the handle is the indi-



THREE-WAY T VALVE.

cator, and that one half turn either way opens or shuts the valve, which cannot be strained or injured by over-turning. These valves dispense with the necessity for the ordinary complicated three valves, with their three handles—often turned the wrong way, and thus put out of order—and have complete control over the three waterways. It is a



THREE-WAY H VALVE.

most simple and effectual contrivance, and reduces misadventure to a minimum.

NEW PUBLICATIONS.

The **GARDENERS' CHRONICLE** (May 19—June 16) contains the following descriptions and illustrations of novelties:—*Dendrobium Harveyanum*, Rehb. f. (p. 624), a fine Birmese Dendrobe, with sulcate fusiform stems, and a lateral inflorescence of four deep yellow flowers having two orange blotches, the oblong petals ornamented with numerous close fringes, the lip round with an obscure callus, a rough surface, and strong fringes; E. Harvey.—*Cattleya maxima*, Backhouse's var. (p. 624), a clumsy designation

for a fine *Cattleya*, flowered 14 years ago by Messrs. Backhouse, and known by its stiff upright leaves, and dark-tinted rosy flowers; Sander & Co.—*Cattleya maxima Doctoris*, Rehb. f. (p. 624), named after Dr. Lindley, a variety with pale rose flowers figured in *Bot. Reg.*—*Greigia Sutherlandi* (p. 624, fig. 100), an interesting and showy plant from Natal, with orbicular-ovate fleshy notched leaves, and clusters of scarlet flowers, having a remarkable cup-shaped disk with stalked glands on its edge; Rodger McLelland & Co.—*Phalanopsis Sanderiana*, Rehb. f. (p. 656), a very fine new species comparable to a rose-coloured *amabilis*, with flattened roots, long leaves green or mottled, and panicles of broad-petalled flowers variable in tint, but with the sepals and petals varying from whitish-rose to rose-purple, and the lip white with cinnamon or purple stripes and yellow stems, having the callus white with brown or purple freckles, nearly horse-shoe shaped, with one blunt angle outwards on each side, "and over it the narrower ascending blunt-angled arm emarginate." Reichenbach calls it "the finest *Phalanopsis* imaginable;" Sir N. M. de Rothschild, W. Lee, Sander & Co.—*Odontoglossum crispum guttatum xanthoglossum*, Rehb. f. (p. 656), a fine yellow-lipped variety with a few cinnamon lines and a great 5-lobed cinnamon-blotch on the anterior part of the disk; D. Todd.—*Cestrum Hartwegii pubescens*, N. E. Brown (p. 656), a very fine greenhouse plant resembling *C. (Habrothamnus) fasciculatum*, having elliptic or elliptic ovate leaves, and dense terminal panicles of bright crimson tubular flowers an inch long; differs from *C. Hartwegii* by its soft hairy calyx; W. Bull.—*Dendrobium Antelope*, Rehb. f. (p. 656), an Eastern species allied to *D. Burbidgei*, with slender stems, 30 inches long, bearing short racemes of yellowish flowers; sent by Mr. Curtis from the Moluccas; Veitch & Sons.—*Dendrobium infundibulum ornatissimum*, Rehb. f. (p. 656), a grand variety, with very large white flowers having the blotches at the base of the column, and the lines on the disk of the lip cinnabar instead of yellow; it is nearest to *D. Jamesianum*, but that has a much narrower lip; G. Neville Wyatt.—*Dendrobium cariniferum lateritium*, Rehb. f. (p. 656), a variety in which the sepals are pale yellow, the petals white, and the lip brick red, with the anterior part yellowish; G. Neville Wyatt.—*Saxifraga Camposii*, Boiss. (p. 670), the proper name of the *Saxifraga* commonly grown as *S. Wallacei*.—*Rodriguezia luteola*, N. E. Brown (p. 688), a small neat flowered epiphyte, with distichous cuneate-ligulate leaves, and 7—9 flowered distichous racemes of small yellow flowers, of which the sepals and petals are connivent; Eaton Hall.—*Colax jugosus punctatus*, Rehb. f. (p. 688), a variety in which the dorsal sepal bears numerous reddish-black hieroglyphical markings, the lateral ones being less thickly spotted; W. Lee.—*Odontoglossum Coradinei hemileucum*, Rehb. f. (p. 688), a pretty variety in which the sepals and petals are white with cinnamon blotches, and the lip and calli wholly light yellow; W. Bull.—*Cattleya guttata phænicoptera*, Rehb. f. (p. 688), a variety in which the sepals and petals are of the deepest magenta purple, and the lip white or whitish, with the warts apparently distinctly arranged; Sander & Co.—*Pritchardia Vuylstekeana*, Wendland (p. 692, fig. 114), a fine new greenhouse fan palm, of short thick-set habit, with large deep green crowded leaves, introduced from one of the Pomotou Isles, in the Dangerous Archipelago.—*Oncidium saltabundum*, Rehb. f. (p. 720), a New Grenada species near *O. porrigens*; it has a zigzag inflorescence, bearing small short-lipped flowers, which are ochre-coloured blotched with brown; Veitch & Sons.—*Odontoglossum elegans, Pollett's variety*, Rehb. f. (p. 720, fig. 118), another clumsy name for a very

fine variety of *O. elegans*, the flowers paniced, stellate, the sepals and petals white, with spots of the deepest chocolate, and the lip with a golden yellow disk and chocolate margins and blotches; H. M. Pollett.—*Adiantum novæ-caledoniæ*, Keyserling (p. 720), a distinct new Maidenhair fern, growing about a foot high, the caudex tufted, the stipes black, the fronds tripinnate, and pedately-pentangular in outline, the lower pair of pinnules having the posterior pinnules larger than the anterior ones, the pinnæ narrow lanceolate, the pinnules lanceolate attenuated, and the sori circular with cordate-orbicular indusia; from New Caledonia; W. & J. Birkenhead.—*Cattleya nobilior*, Rehb. f. (p. 728, fig. 120), a fine novelty, closely allied to *C. Walkeriana*, but larger in its parts, and producing finer flowers of a pleasing rose colour, the lip very prominent, having its lateral lobes rolled over the column, and the central lobe expanded, reniform emarginate and beautifully veined; Brazil; Compagnie Continentale.

FLORE DES SERRES (Nos. 10, 11, 12, vol. xxiii.) contains figures of:—*Anthurium andegavense*, Devansaye [tt. 2454—5], a grand hybrid between *A. Scherzerianum* and *A. S. album*, in which the exterior of the large oval spathes is bright scarlet thickly dotted with white, and the inner surface is white irregularly but freely blotched with scarlet; *A. de la Devansaye*.—*Cypella cærulea*, Seub. [t. 2456], the old *Marica cærulea*.—*Oncidium cucullatum*, Lindl. [t. 2457], a pretty white-lipped purple-spotted species from New Grenada and Peru.—*Lysionotus ternifolia*, Wall. [tt. 2458—9], a beautiful Indian Cyrtandraceous plant, with the aspect of a *Chirita*; it is a perennial herb, with usually ternate lanceolate-oblong leaves, and numerous axillary cymes of large bilabiate lilac flowers; Van Houtte.—*Sanchezia longiflora*, Hook. fil. [t. 2460], the fine purple-tubed *Acanthad*, introduced by Messrs. Veitch some years since, and figured in B. M. as *Ancylogyne longiflora*.—*Dendrobium Farmeri albiflorum*, E. Morr. [t. 2461], a pretty variety of this beautiful Indian Orchid, with the sepals and petals nearly white.—*Double Tuberous Begonias*: *Mlle. Bertha Frébel*, orange; *Mlle. Jeanne Pecquereau*, yellow; *Mad. Valérie Guéquier*, salmony pink; *Princesse Stephanie*, rich scarlet; *Mlle. Alice Guilmot*, rose pink; *Princess Clementina*, white. They are all fine double flowers, especially that named *Princesse Stephanie*, which has remarkably smooth petals.—*Nerine pudica*, Hook. fil. [t. 2464], a pretty bulb from S. Africa, the flowers white faintly streaked with red.—*Oncidium phymatophilum* [t. 2465], a pretty Brazilian Oncid., with subpaniculate racemes of narrow yellow cross-barred sepals and petals, and a white lip.—*Rhododendron Dalhousiæ Victorianum* [tt. 2466—67], a white flowered hybrid, raised by M. Victor Cuvelier, between *R. Nuttallii*, and *R. Dalhousiæ*, with large fragrant flowers in immense heads, at first yellowish, and becoming creamy-white on their full expansion; L. Van Houtte.—*Rose H. P., Léna Turner* [t. 2468], a vigorous and floriferous rose, the flowers having the petals closely imbricated, of a rich deep carmine, the central ones fiery red; raised by M. Eugène Verdier.—*Odontoglossum Kramerii*, Rehb. f. [t. 2469], a charming Costa Rica Orchid with pinkish flowers, having conspicuous purple and yellow markings on the disk.—*Cameilia Madame L. Van Houtte*, Van Houtte [tt. 2470—1], a charming variety named after the late Madame Van Houtte; it is very free blooming, with medium-sized neatly imbricated flowers of a rich shaded rose, slightly veined with carmine; of first-rate merit; L. Van Houtte.—*Eranthemum Cooperi*, Hook. [t. 2472], a pretty Acanthaceous stove shrub from New Caledonia, with bilabiate white flowers having the lower segment mottled with

purple.—*Lælia grandis*, Lindl. [t. 2473], a very distinct and striking plant, with clavate monophyllous stems, and two flowered peduncles, the flowers large, with the lanceolate sepals and petals of a pronounced nankin colour, and the lip white streaked with rose.—*Arum Dioscoridis spectabile* [tt. 2474—5], a stout-growing Arad from the South of Europe and Asia Minor, with green halberd-shaped leaves, and blackish-purple spathes greenish at the tip, surrounding an almost black spadix.—*Bolbophyllum lemniscatum*, Hook. fil. [t. 2476], a charming little Orchid, whose beauty is of the most refined order when seen under a microscope; found by Rev. C. Parish in Moulmein.—*Azalea (indica) Baron Nathaniel de Rothschild*, Van Houtte [tt. 2477—8], a superb new variety, with very large flowers of the finest form and substance, double, and of a rich violet purple, quite distinct from anything in cultivation, and a decided acquisition; L. Van Houtte.—*Cattleya luteola*, Lindl. [t. 2479], a pretty dwarf growing Brazilian species, with ovate-oblong furrowed solitary elliptic lance-shaped leaves, and racemes of pale yellow flowers, having an orange-coloured lip.—*Pear Beurre Wamberchies*, a new variety obtained by M. Joseph Wamberchies, of Ressaix, remarkable for its keeping qualities, its ripening season being in May or June.—The number closes with a portrait and appreciative memoir of M. Decaisne, the latter from the pen of Dr. Planchon.

The GARTENFLORA (May) contains *Silene virginica*, Lin. [t. 1116, fig. 1], a very old but probably long-lost garden plant, a herbaceous perennial, growing from 1½ to 2 feet high, with oval-lanceolate leaves, the lower ones tapered downwards into a long stalk, and bright scarlet flowers in trichotomous panicles, the petals narrow bifid and slashed at the sides.—*Linaria aparinoides aureo-purpurea*, Regel [t. 1116, fig. 2], a pretty annual, with erect twiggy stems 1½ to 2 feet high, subulate leaves, and short racemes of pleasing flowers which have a violet-purple corolla with an orange-coloured palate, and a spur twice as long as the tube. It is the *L. reticulata aureo-purpurea* of Huber & Co. The typical form is described by Dr. Regel as having pale yellow flowers.—*Susarium Segettii*, Philippi [t. 1117, fig. 1], a curious new Iridaceous plant, of small stature, with a slender creeping rhizome, terete simple stems about 6 inches high, terete rigid subfistulous leaves as tall as the scape, which bears within a scarious spathe of two bracts, a fascicle of subsessile monophyllous hypocrateriform flowers having a very slender tube and six-parted blue perianth; Chili and Patagonia.—*Umbilicus Lieveni*, Ledeb. [t. 1117, fig. 2], a hardy perennial, with simple erect stems a foot high, clothed with blunt subterete leaves, and terminated by cymes of unilateral umbels of small pale pink flowers; native of the Altai and Ural Mountains, and more recently found in Eastern Turkestan.—Under t. 1118 is given a plate purporting to represent a large Fig tree, *Ficus Carica*, at Grimston Park, but the figure is a portrait of a large Sycamore tree, *Acer Pseudo-Platanus*, as stated when it was originally published in the *Gardeners' Chronicle* in 1881.

The GARTEN-ZEITUNG (June) has coloured figures of *Anthurium Andréanum*, which is now well known and generally appreciated; and *Philodendron calophyllum*, Brongn., a fine Arad, of Brazilian origin, with spreading oblong lance-shaped leaves, and stout ovate-lanceolate spathes deep red within and whitish on the outside, the base wrapped round the cylindrical white spadix which equals the spathe in length. There is a fine figure of this plant in *L'Illustration Horticole*, 3 ser., t. 76.

L'ILLUSTRATION HORTICOLE (5 liv.) contains the following subjects:—*Cattleya nobilior*, Rehb. f. [t. 435], a very handsome dwarf Orchid, allied to *Cattleya Walkeriana*.—*Chamærops hystrix*, Fraser [t.

486], a handsome fan palm, with a short stout dark-coloured stem bristling with erect fibrils and terete spinescent fibres, the triangular stalks with denticulate scabrous margins, and the bright green lamina parted into many ensiform segments; it is rare in gardens. An unnumbered plate is devoted to a view in the New Winter Garden of the Compagnie Continentale.

REVUE DE L'HORTICULTURE BELGE ET ETRANGERE (June) contains a figure of the pretty double white *Rubus rosafolius coronarius*, a first-class decorative plant, far too little known and too seldom grown.

The JOURNAL DES ROSES (June) figures the *Bourbon Rose Louise Odier*, a variety raised by M. Margottin père, of Bourg-la-Reine; and sent out in 1857. It is a hardy vigorous growing variety, the flowers of which are medium-sized, full, well-formed, and of a soft bright pinkish rose-colour. It is said to be a good variety for forcing.

The BOTANICAL MAGAZINE for June contains, *Bomarea patacocensis*, Herb. (t. 6692), a fine Ecuadorian conservatory climber recently introduced under the name of *B. conferta*; see p. 107. *Angræcum modestum*, Hook. fil. (t. 6693), a small-growing Madagascar epiphyte, with a short stem distichous elliptic-oblong leaves, and pendulous racemes of a dozen or more white flowers 1-1½ inches across, with a slender spur two inches long; Kew, flowering in April.—*Gerrardanthus tomentosus*, Hook. fil. (t. 6694), a Cucurbitaceous plant from Natal, with angularly lobed leaves, and dull yellow flowers; remarkable for its large tuberous root; Kew.—*Clerodendron macrosiphon*, Hook. fil. (t. 6695), a slender stove shrub, from Zanzibar, with oblanceolate deeply-toothed leaves, and small terminal cymes of very long slender-tubed oblique limbed white flowers; Kew.—*Cephaelis tomentosa*, Willd. (t. 6696), a S. American hirsute shrub, with rather large elliptic leaves, and axillary or terminal peduncles bearing a pair of opposite bracts within which are seated the crowded tubular yellow flowers; British Guiana; Veitch & Sons.—*Acer insigne* Boiss. et Buhc (t. 6697), one of the handsomest and the hardiest of the Maples, remarkable for its deep red bud scales and pale green palmatifid leaves; Dr. Masters.

The REVUE HORTICOLE (June 1-16) contains a plate of two *Tuberous Begonias* of large size, raised by MM. Couturier et Robert: one named *M. Ed. André* has very large single flowers 5½ inches across, with four obovate petals of a rich vermillion, the other *M. A. Hardy*, has almost equally large flowers, of a charming rose colour. In both cases the habit is said to be good. The other plate represents the *Peach Early Chevallier* (Précoce Chevalier); a medium-sized fruit, resembling Early Beatrice, but rounder with a deepish suture, deep red sometimes marbled, the flesh white, melting, and parting from the stone.

PLANT LIFE, by Dr. Masters (Bradbury, Agnew & Co.), is the title of a capital little book which forms one of Mr. Morton's series of Farm Handbooks; but as plant life is the same whether in the farm or garden, it is *mutatis mutandis* equally useful to gardeners as to farmers. It is in fact a brief sketch of the life history of a plant, according to the latest lights thrown on the subject by modern physiologists, from which it will be seen that the processes of vegetable life, though from some points of view complicated, are in reality of the simplest character. "Every plant and every part of every plant is made up of cells [filled with protoplasm, the physical basis of life]. As a cell a plant begins its independent life; with and by cells it lives, grows, multiplies; by their decay it dies. It is, as has been said, the protoplasm which is the essential agent in all these processes."

It is a book which all gardeners should read attentively, and all aspiring young gardeners should, as far as possible, commit to memory.

THE LILY OF THE VALLEY, by William Roberts (L. Upcott Gill), as the full title says, tells all about the Lily of the Valley and how to grow it, at least as much as the most assiduous cultivator thereof can desire to know. Of course in the culture of this fragrant favourite flower, the greatest importance attaches to the forcing process, which, together with the preparation of the plants for it, is very fully, and we think very clearly and correctly explained. It is a good sixpenny worth.

HARDY PERENNIALS AND OLD-FASHIONED PLANTS, by J. Wood (L. Upcott Gill), appears to be intended to form a volume devoted to the description of some of the most select of this class of plants, with occasional figures of some of the most important, useful cultural directions being added. There is an effort made to keep pace with the times, since *Chionodoxa* occupies a page beside one devoted to *Cheiranthus*. It is issued in sixpenny numbers.

GARDEN GOSSIP.

AMONG the decorative plants of the future we shall have to give a prominent place to the IMANTOPHYLLUMS, which are being raised from seed in large numbers in the Belgian nurseries, and amongst which, despite a certain amount of sameness of colour, there are some strikingly handsome improved varieties already secured. A recent acquisition to the group is the variety called *Mrs. Laing*, exhibited at South Kensington on April 24, by Messrs. Laing & Co., of Forest Hill. The flowers are large and well-formed, and the trusses massive, the colour being a rich orange-red, which is the prevailing hue. The variety was awarded a 1st-class Certificate.

— THE new DOUBLE WHITE MIGNONETTE has now been grown sufficiently long for its merits as a garden plant to have been in some measure ascertained; and it is found to have such an attractive appearance when well grown, and moreover to be so admirably adapted for decorative purposes, that it is being cultivated extensively by the growers for market. The plant has a much better habit than the single forms, and the flower spikes, which range from six to ten inches in length, are more suitable for associating with other cut flowers. As it does not produce seed, it has to be propagated by cuttings, which strike freely at almost any season of the year with the aid of a little artificial heat, and good supplies of which may be obtained by nipping out the points of the shoots which show a tendency to bear flowers.

— THE way to PROPAGATE TUBEROUS BEGONIAS has been recently described by a writer in the *Gardeners' Magazine*. For three years, he writes, "I have grown the tuberous begonias for bedding purposes, and have accidentally discovered that these valuable plants may be increased by division of the tubers—a mode of increase well suited to the requirements of those who have no conveniences for striking cuttings. The tubers are laid in a cucumber pit or melon frame to start, and when they commence to grow they are cut into pieces of moderate size, each portion having one or more shoots. I have sometimes found the crown quite hollow and full of eyes, of which not more than two or three would have started had the tubers been allowed to remain whole, but by cutting them the greater part of the eyes were able to start and a bushy plant ob-

tained from each portion. After they are potted the portions divided are placed in a frame with sufficient artificial heat to give them a start, the frame being freely ventilated. The plants are bedded out early in June.

— **AMONGST** large-flowered single varieties the **WALLFLOWER CRANFORD BEAUTY**, obtained in 1881 as a seedling from **Yellow Perfection**, by Mr. Graham, of Cranford, near Hounslow, will take a high position. It is distinct and hardy, and comes true from seeds; it is, moreover, early, the plants having been this late season in full flower out of doors in February, and some were in bloom before Christmas. The great breadth of its petals, and the clearness and brightness of its colour will, no doubt, make it a general favourite. Graham's **Yellow Perfection** was figured in our volume for 1864.

— **THE** value of **SOOT AS A LIQUID MANURE** is commonly recognised, but it is questionable if it is used in this form as extensively as it might be. It is said that its value as a manure is chiefly attributable to its containing ammonia, the percentage of which, however, varies in different samples. Some growers recommend that it be used only occasionally—say once or twice a week; but others use it constantly by placing a bag of soot in the stove tank, and using the water constantly for all plants. The result is seen in their vigorous and cleanly growth. The application of soot water greatly assists to keep the plants free from the attacks of insects. Soot is without doubt a most valuable manure, but large quantities are wasted which might be turned to excellent account by the cultivator.

— **THE** extremely floriferous **CRASSULA JASMINEA** makes an extremely pretty pot plant for the conservatory, and some of the market growers around London seem to have taken a particular fancy for it. It grows from 6 inches to 8 inches high, is very neat in growth; its dense tufts of flower-stems forming a compact, globular mass of white blossoms in umbelled clusters. It is an old plant in gardens, but it is only recently that its merits as a conservatory or market plant have been recognised.

— **IN** order to **PROTECT IRON AND STEEL FROM RUST** the carbonates of potash and soda should be made use of. They possess the same property of protecting iron and steel from rust as do these alkalies in a caustic state. Similar results have been obtained with sea water to which the carbonates of potash or soda have been added.

— **IN** reference to the **CUCUMBER AND MELON DISEASE**, we have been asked to say that if any Nurserymen or Gardeners have their plants attacked by the above, or with Cob-web fungus on seeds or cuttings, they can be supplied with a material that will probably destroy the disease, with instructions, gratis and carriage free from E. W. Smith, 109, Cheapside, E.C.

— **MESSRS. RIVERS & SON** exhibited the **ALEXANDER PEACH** in excellent condition at South Kensington, on May 8th, and were granted a 1st-class Certificate for it; the fruits shown were as large as an average Royal George, richly coloured on the exposed side, and, considering the time of year, of excellent flavour.

— **THE CLEMATIS KRAO**, exhibited by Mr. C. Noble, of Bagshot, at the Regent's Park Show on April 25, is a novelty of merit, its peculiar feature being the presence of a bold tuft of stamens, having white filaments. It was awarded a 1st-class Certificate, which it well merited. The flowers are formed of eight broadly ovate sepals of a purplish-blue, sufficiently deep in colour to produce a good contrast with the white filaments. It is not so deep a purple as the variety named **Thomas Moore**, which also has conspicuous white filaments to the stamens, but while that belongs to the **Jackmanni** type, **Krao** appears to be one of the **patens** section.

— **MESSRS. DEHÉRAIN & BRÉAL** in their researches on the **ACTION OF LIME ON GERMINATING SEEDS** have ascertained that its presence is beneficial, especially as regards the development of the root, and specially when combined with ulmic acid. It might therefore be worth trying what effect the use of lime-water might have on the germination of seeds.

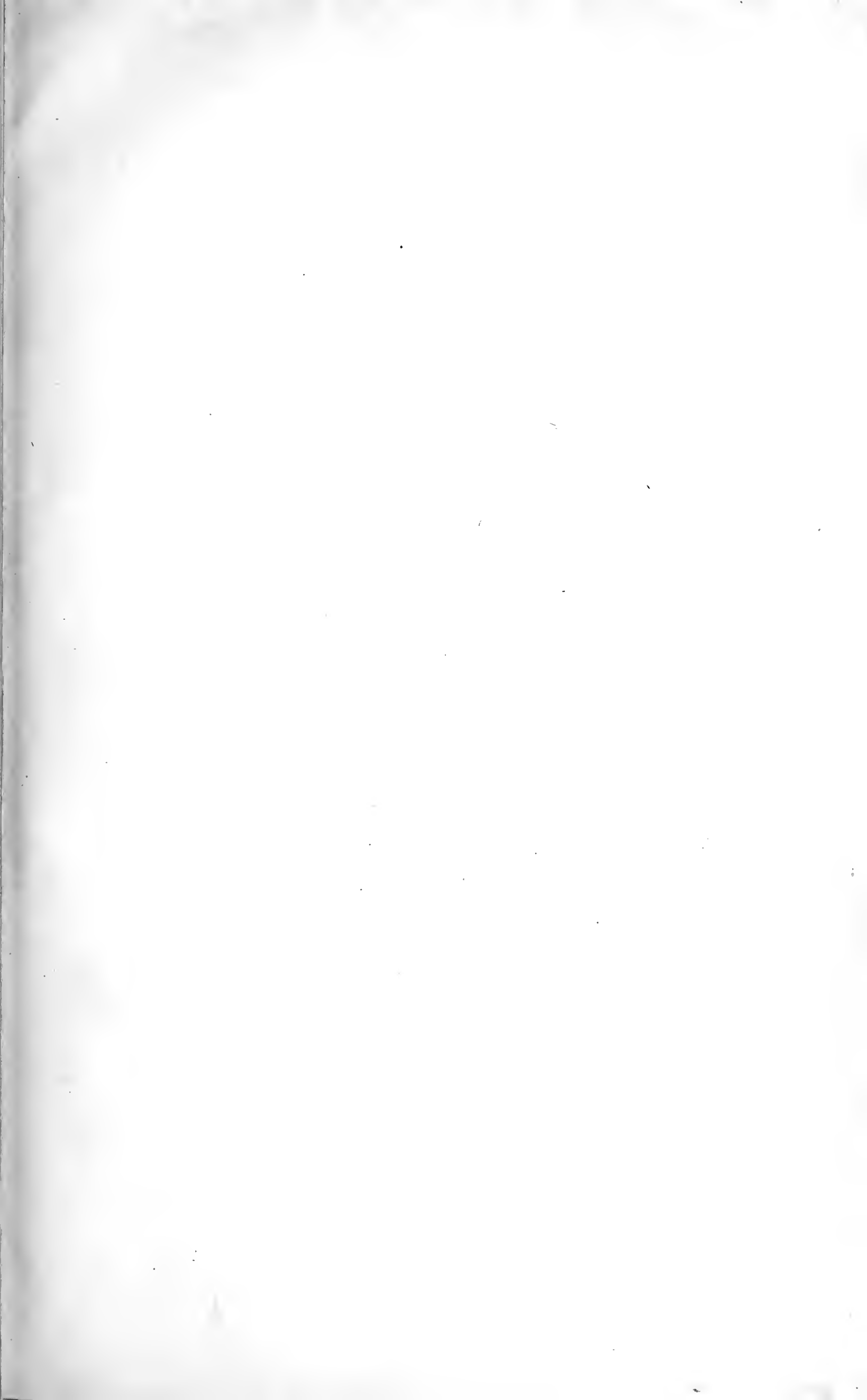
— **THE** charming little **Gesnerad**, known as **STENOCASTRA CONGINNA**, of Sir J. D. Hooker (*Bot. Mag.*, t. 5253), has now been relegated to *Sinningia* by Mr. Bentham. It is but a miniature plant, but it is a gem. It forms a little tuft of extreme neatness of habit, the small roundish crenate stalked leaves extending themselves along the surface of the soil, while the numerous tiny flower-stalks bear the violet and white attractive flowers singly.

— **WE** have tried the **MYOCOM FLY GUM**, and find it very effectual in catching these troublesome house-pests. It is described as an Eastern gum of remarkable tenacity, and attractive to flies. It is certainly tenacious enough, and when spread on pieces of string suspended from any convenient point draws to it and holds fast hosts of these little creatures which in summer time are found to be so troublesome. It is used by drawing the string across the gum, twisting it gently till it is well coated with the gum, and then suspending it from chandeliers or from any out of the way object which may be convenient for the purpose.

— **AN** attempt to place the **HULL BOTANIC GARDENS** "on a satisfactory footing as a horticultural and scientific establishment" is being made; and a Horticultural Exhibition has been inaugurated by the Curator, Mr. MacMahon, to aid in this object. The show is to take place on the three days, July 11th to 13th, and a very liberal schedule of prizes has been issued.

In Memoriam.

— **MR. ALDERMAN CLAY**, Honorary Secretary of the Bury St. Edmunds and West Suffolk Horticultural Society, died, suddenly, on June 6th. The Bury Society had the merit of being the first to bring the Royal Horticultural Society of London into the provinces, and the magnificent show held on that occasion marked a new departure in horticulture. Some of Mr. Clay's garden parties to horticulturists and others, when filling the position of Mayor of Bury, will long be remembered as most genial and enjoyable.





Armed Forces

Department of Defense

CAMELLIA EUGÈNE MASSINA.

[PLATE 591.]

OUR drawing of this charming Camellia was made some two or three years since from flowers recommended to our notice by Mr. W. Paul, of Waltham Cross, as one of the best of the modern or little known varieties. The Waltham Cross Nursery, now carried on by Messrs. W. Paul & Son, has a well-established reputation for its collection of Camellias, which is, we suppose, by far the best now existing in the vicinity of London. This collection is, moreover, renowned as much for its admirable management, the plants being kept in a robust state of health, as it is for its extent and variety, and we do not know of a morning call better worth

the effort than a visit to inspect Messrs. Paul's collection of Camellias during the blooming period.

The variety *Eugène Massina*, which is the subject of our illustration, is a large full imbricated flower, of the very highest quality. The colour is particularly pleasing, being a soft shade of deep rose, shading off to a paler tint at the edges of the smooth evenly-imbricated petals. The plant is of moderately vigorous habit, with broad and effective foliage. It will be found to be a very pleasing addition to any collection of these highly decorative evergreen shrubs, in which it does not already exist.—T. MOORE.

THE HOLLYHOCK.

SOME of us had great hopes that the insidious disease which has almost driven this grand autumn flower out of the country, had well-nigh disappeared; but again are we doomed to disappointment. Our small collection of named Hollyhocks was thoroughly cleansed from the pest, and the plants brought over to our new place, where I had great hopes to save seeds from them, and get up a good collection which was to be quite isolated. I did not think of the disease being on the common Mallows, but Mr. Worthington Smith kindly sounded a note of warning, and on looking round, true enough the Mallows were found within easy distance of our garden, quite smothered with the pest.

The Hollyhocks are growing freely as yet and show no signs of it. The way they were cleaned after the disease had attacked them was, to pick off all leaves showing the small brown spots; the plants were then dipped overhead in soapy water thickened with flowers of sulphur; and as often as a single spot was seen, off came the leaf, followed by the plants being dipped. This was repeated often enough to entirely clear the leaves from the pest. One would fain hope that the disease would utterly destroy the Mallows, and leave nothing for it to feed upon.

Those who are the fortunate possessors of a collection of Hollyhock plants, ought to be proud of them, and give them careful attention. They are now growing freely and ought

to be tied to the sticks as they advance in growth. The lateral shoots ought to be cut off and will form good eyes to put in as cuttings in a spent hot-bed. Indeed any cuttings that can be obtained from the base or sides of the stem will root freely enough, and all of them make good plants to be wintered in pots, and they come into flower early next season. In dry weather they ought to have a mulching of rotten manure and be freely supplied with water at the roots; and it is a great help to them to be syringed overhead. The water should be applied to the under sides of the leaves, for the red spider is very fond of them, and it is on the under side of the leaf that it makes its home.

Seedling Hollyhocks make a grand show, and it is now (July) a good time to sow; the seeds may be sown on the open border, but many of them will fail to vegetate there, and it is better to sow them in boxes or pots, and these should be plunged in a hot-bed where there is just a little bottom heat. The young plants will soon appear, and ought to be pricked out into a border of fine soil, about six inches apart. By the end of August or early in September they may be planted three feet apart in rich deep soil. If planted at that time they become thoroughly established before the winter, and are seldom injured by our ordinary winters. The choice named varieties ought not to be wintered out of doors, but be potted or planted out in cold frames,

where it is possible to protect them easily from excessive wet.

There are two classes of plants, which the Hollyhock cultivator has to deal with in the spring. Those propagated during the previous summer and autumn from side growths of the main stem; and secondly, plants raised from growths which issue from crowns of the old plants during the winter, and are ready for taking off with a heel attached in January, February, or March. The spring propagated plants flower later and prolong the season by a few weeks; a most important consideration if the flowers are intended for exhibition, say in September. The two principal factors for successful culture are, a very rich and deep soil, to be kept moist by watering and mulching in hot dry weather, and next, cleanliness. The red spider gets on the under sides of the leaves and quite takes all life and colour out of them if it is allowed to spread over the plants.—J. DOUGLAS, *Great Gearies, Ilford*.

MESSRS. CARTER'S SEED FARMS.

WHAT specially strikes one in walking over Messrs. Carter & Co.'s seed farms (which occupy extensive tracts of land at Dedham and St. Osyth, near the Essex coast), is the purity of the strains of the many varieties of plants which are cultivated thereon, one kind often occupying wide drifts of from 100 to 200 yards or upwards in length. Beyond the merest shades of difference such as do not at all affect the general purity of the whole, the numberless plants appear to have been cast in the same mould. That there is a slight divergence amongst a batch of seedling plants, and in some kinds more than in others, is well known, but here it is in most cases barely perceptible, so closely and perfectly is the necessary system of "rogueing" carried out. It is this purity of strain which gives their high character to the seeds sent out by the firm. As an illustration of this practical identity, which is not destroyed by a certain degree of variability, we may refer to an immense breadth of a fine light-ground Sweet William, which in its general effect appeared to be quite uniform throughout, but when more closely inspected it was seen that the

noble trusses of large flowers presented every possible variation of marking, taking into account the tints of crimson and purple, and the breadth of the dark ring of colour which gives life to the flowers. Here was certainly a highly commendable strain of this beautiful and popular flower.

One of the most unexpected sights was a long drift, some quarter of an acre or more in extent, of *Matthiola bicornis*, one of the night-scented Stocks, an annual with dull-hued flowers, which if they do not commend themselves very highly to the organs of sight, are most grateful to the olfactory nerves during the evening hours. In the present case this bed, we were told, is sufficient to perfume the whole neighbourhood as night comes on. But where go all the seeds of such a plant—not showy, and one would suppose not much known or cultivated? The answer would give some clue to the wide-spread character of the business transacted by this firm.

Our space will not permit us even to mention a tithe of the subjects which commended themselves to notice as good and worthy of comment. We can only briefly refer to a few of the more strikingly beautiful, taking them in the order in which they were seen. First of all then, we come to a bed of *Clarkia* Mrs. Langtry, a charming double-flowered form of *integripetala* of dwarf free-blooming habit, the soft rosy flowers distinctly edged with white. Near this came *Godetia Spotted Carpet*, a low dense-growing form, no doubt out of *repens*, forming a little later on a carpet-like sheet of white flowers, having a scarlet spot on each petal; while close by was the large-flowered and very showy *Godetia Satin Rose*, the finest of all, whose gorgeous blossoms are of a brilliant glossy rose colour. The *Danebrog Poppy*, a single variety of *Papaver somniferum*, here growing about 3 ft. in height, and producing large flowers with fringed scarlet petals, having a broad white basal blotch, was strikingly handsome; as also was *Papaver umbrosum*, which belongs to the *Rhœas* type, and has the blotch on the intense crimson flowers, of a glossy black. A patch of *Golden Queen Mignonette* reminds one of the distinct and pleasing character of this still novel variety, whose peculiar feature resides in the golden-tinted anthers; while a breadth of *Leptosiphon*

roseus confirms the lingering suspicion, that it is the most pleasing of its race.

A quarter of an acre of *Lupinus nanus* in full blossom is a sight not easily forgotten, its brilliant spikes of blue and white flowers being very effective; and a bed of *L. subcarneus* near at hand, reveals another charming annual with even richer blue in its flowers, but not quite so densely bloomed. Then we come to a large plot, probably the eighth of an acre in extent, of the bronzy *Eschscholtzia* (*crocea*) Mandarin, and another of the deep rose-coloured Rose Cardinal, both very effective. Long stretches of *Petunias* in full blossom showed an excellent strain of mixed varieties, in which the striped ones were predominant. The beds of Rocket Larkspur, dwarf and tall, of various colours, were singularly pure in strain and pleasing in appearance, especially the dwarf forms, which closely resembled beds of *hyacinths* in their full glory; the white, pink, and grey forms were particularly attractive. The true white Sweet Pea is a lovely form not so often met with as it deserves, since it must be an excellent bouquet flower, being pure in colour and rich in perfume. A large bed of *Mimulus cupreus* Brilliant, a selected form with brightly-tinted flowers, was quite a picture, its colour being rich and glowing; and a smaller patch of *Linaria reticulata* aureo-purpurea was very attractive, the graceful twiggy dwarfish branches forming a pleasing base for the numerous spikes of rich bronzy-purple flowers, which are remarkable for their large deep orange-yellow palates, which give a distinct effect of golden dotting over the surface of the plants. Finally we came to *Lobelia Prima Donna*, a decided novelty, of the speciosa type, bearing a profusion of flowers of rich maroon or ruby-crimson, a colour which, while it will not cause it to supersede the fine dwarf blue *Lobelias*, will no doubt come in as a very distinct and pleasing element in bedding compositions.

Perhaps one of the most effective of summer annuals is the Tom Thumb *Tropæolum*; and of this there were several varieties worthy of a place in all flower-garden arrangements. Beginning with the Empress of India, a splendid and recent variety with blossoms of the deepest and richest crimson, we have next King of Tom Thumbs, an intensely bright scarlet; Spotted King, brilliant golden yellow

with dark spot; Golden King, brilliant pure spotless yellow; and *cœruleo-rosea*, a pleasing sort with flowers of a soft rosy hue flushed with a tint of blue—all true to a shade.

The vegetable seeds, of which samples were fast ripening off, we are reluctantly obliged to pass over, with the remark that we noted wide breadths of two of the best Peas yet offered, and which we believe originated at St. Osyth, namely, Stratagem and Pride of the Market, varieties which stand at the head of their respective sections of wrinkled peas of high quality, the former as being adapted for private establishments, and the latter for market gardens. Beds of Perpetual Parsley, a beautiful mossy variety, which on Mr. Sharman's authority we may state, "won't run to seed," attracted attention; amongst these were plants four years old, which had not yet taken on the flowering condition; indeed we remember to have seen the same bed in a fresh and green leafy condition two years ago.

It will be obvious from this very brief and imperfect sketch that seed farms are full of horticultural interest; and certainly that interest is abundantly developed in those of Messrs. Carter, Dunnett, & Beale at Dedham and St. Osyth.—T. MOORE.

STRAWBERRY PLANTING.

IT has often been our practice with certain kinds of Strawberries, when they had become scarce, to divide them and to plant the divided old plants on rich well prepared ground during the months of July, August, or September, as opportunity afforded. We never were disappointed at any time with the result. Of course plants which have been forced and well hardened before planting, or young plants carefully prepared and well treated, are always preferable; but it often occurs that a difficulty is met by dividing the old plants. Last season when we had to increase our stock, a goodly-sized brake was lifted, divided, and planted, a quantity of rich soil being given to each plant. All were well mulched, and at present (early in July) the crop is turning in abundantly. The fruit is perhaps not so numerous as those on plants of the same age are bearing, which were left untouched last season, but I think are larger. We have seen the practice of dividing plants for forcing adopted, but never could say that it was a success, the plants having always been inclined to fruit, and persisting in throwing up small flowers when they should have been growing.—M. T., *Stirlingshire*.

DURATION OF ORCHID FLOWERS.

ONE principal object of the following list, communicated to *L'Orchidophile* by M. Petot, is to show that his small collection of some 300 species and varieties, cultivated in one house, with Palms, Ferns, Gesnerads, &c., brings him a good return in the shape of flowers throughout the whole year. *Odontoglossums* and *Masdevallias*, he says, grow and flower in company with *Vandas*, *Saccolabiums*, *Phalænopsids*, *Dendrobiums*, &c., the highland species being grown in the coolest and most ventilated part of the house, and the Indian island and tropical South American plants in the hottest parts.

NAMES OF ORCHID.	FLOWERING	
	Com-menced.	Ended.
	1882	1882
<i>Calanthe Veitchii</i>	Jan. 1	Feb. 10
<i>Oncidium cucullatum</i>	10	15
<i>Gongora maculata</i>	14	24
<i>Cypripedium pardinum</i>	20	Mar. 16
<i>Vanda gigantea</i>	25	25
<i>Odontoglossum maculatum</i>	28	Feb. 20
<i>" Dawsonianum</i>	Feb. 1	20
<i>" cristatum</i>	3	24
<i>Cypripedium barbatum</i>	6	Apr. 4
<i>Selenipedium Roezlii</i>	12	Dec. 7
<i>Dendrobium secundum</i>	15	Apr. 5
<i>Gongora maculata</i>	18	Mar. 3
<i>Oncidium serratum</i>	22	Apr. 10
<i>Cypripedium villosum</i>	28	May 2
<i>Cattleya amethystina</i>	Mar. 1	Apr. 8
<i>Pilumna nobilis</i>	11	Mar. 20
<i>Phalænopsis grandiflora</i>	20	May 12
<i>Dendrobium japonicum</i>	21	Apr. 8
<i>Colax jugosus</i>	25	20
<i>Odontoglossum pulchellum</i>	28	15
<i>Cattleya Schilleriana</i>	30	11
<i>Galeandra minax</i>	30	30
<i>Odontoglossum Pescatorei</i>	Apr. 16	June 9
<i>Cypripedium Bullenii</i>	17	1
<i>" Argus</i>	18	30
<i>" Boxallii atratum</i>	15	15
<i>Cattleya Mendelii</i>	29	20
<i>Masdevallia Lindeni</i>	May 3	May 30
<i>Odontoglossum Cervantesii</i>	4	June 5
<i>Cypripedium superciliale</i>	5	1
<i>Oncidium Papilio majus</i>	7	May 15
<i>Cypripedium Warneri</i>	7	June 28
<i>Colax Puydtii</i>	7	May 25
<i>Cattleya intermedia</i>	10	June 30
<i>" guttata</i>	10	30
<i>Cypripedium Lawrenceanum</i>	14	4
<i>Epidendrum fragrans</i>	15	July 1
<i>Cypripedium Hookeræ</i>	16	2
<i>Calanthe vcratrifolia</i>	22	22
<i>Cypripedium barbatum majus</i>	23	Aug. 7
<i>Lycaste aromatica</i>	27	June 5
<i>Cypripedium barbatum grandiflorum</i>	29	Aug. 29
<i>" Dayanum</i>	30	July 30
<i>" superbiens</i>	June 6	30
<i>Selenipedium conchiferum</i>	7	Dec. 8
<i>Odontoglossum tripudians</i>	7	June 30
<i>Dendrobium crystallinum</i>	7	15
<i>" Parishii</i>	7	16
<i>" Devonianum</i>	7	15
<i>Bletia hyacinthina</i>	7	30
<i>Cypripedium spectabile</i>	9	25
<i>Stanhopea insignis</i>	10	20
<i>Cattleya Warneri</i>	11	20

NAMES OF ORCHID.	FLOWERING	
	Com-menced.	Ended.
	1882	1882
<i>Trichopilia crispa marginata</i>	June 12	July 1
<i>Thunia Bensoniæ</i>	15	7
<i>Cypripedium superbiens</i>	18	20
<i>Odontoglossum grande</i>	20	Aug. 20
<i>Oncidium Papilio majus</i>	23	July 2
<i>Epidendrum vitellinum majus</i>	25	Sept. 5
<i>Saccolabium rubrum</i>	26	July 7
<i>Selenipedium Pearcei</i>	27	Aug. 19
<i>Chysis aurea</i>	28	July 23
<i>Saccolabium retusum</i>	July 1	Aug. 2
<i>Cattleya Aclandiae</i>	2	20
<i>Stanhopea tigrina</i>	5	10
<i>Masdevallia infracta</i>	5	18
<i>Oncidium concolor</i>	8	Sept. 28
<i>Stanhopea insignis</i>	12	July 17
<i>Odontoglossum crispum Lehmanni</i> ..	15	Aug. 17
<i>Mesospinidium vulcanicum</i>	19	19
<i>Vanda tricolor</i>	22	Sept. 22
<i>Selenipedium longifolium</i>	24	Apr. 21
<i>Cypripedium Swanianum</i>	25	Sept. 15
<i>Galeandra minax</i>	25	Aug. 8
<i>Cypripedium Harrisianum</i>	30	Apr. 10
<i>Oncidium Papilio</i>	Aug. 1	Aug. 13
<i>" species</i>	4	23
<i>Masdevallia amabilis</i>	5	Sept. 17
<i>Oncidium ramosum</i>	6	2
<i>Stanhopea graveolens</i>	12	Aug. 18
<i>Epidendrum prismatocarpum</i>	28	Oct. 15
<i>Cypripedium Warneri</i>	30	Dec. 8
<i>Stanhopea graveolens</i>	Sept. 5	Sept. 10
<i>" oculata</i>	9	14
<i>Oncidium carthaginense</i>	9	Oct. 7
<i>Selenipedium Sedeni</i>	10	20
<i>Masdevallia myriostigma</i>	22	20
<i>Stanhopea oculata pallida</i>	Oct. 5	12
<i>Pescatorea Klabochozum</i>	4	24
<i>Cypripedium insigne punctatum</i>	4	Dec. 5
<i>Oncidium crispum</i>	7	1
<i>" Papilio majus</i>	11	Oct. 23
<i>Selenipedium Schlimii</i>	18	Jan. 22
<i>Cypripedium Ashburtoniæ</i>	18	Dec. 30
<i>Oncidium prætextum</i>	18	Nov. 24
<i>" Forbesii</i>	18	26
<i>Sophronitis cernua</i>	19	19
<i>Cypripedium Warneri</i>	23	Dec. 7
<i>Barkeria Lindleyana</i>	23	2
<i>Cypripedium Spicerianum</i>	27	27
<i>" Petri</i>	28	25
<i>Calanthe Veitchii</i>	28	25
<i>Cypripedium Dauthieri</i>	28	15
<i>" insigne</i>	28	Jan. 28
<i>" Maulei albo-marginatum</i>	Nov. 2	Feb. 5
<i>" selligerum</i>	8	Dec. 31
<i>Dendrobium bigibbum</i>	8	18
<i>Cypripedium Crossianum</i>	8	Jan. 1
<i>Masdevallia Chimæra</i>	8	Dec. 20
<i>Selenipedium Schlimii album</i>	13	16
<i>Calanthe vestita rubra</i>	14	20
<i>Masdevallia amabilis</i>	14	15
<i>Sophronitis militaris</i>	15	15
<i>Cattleya Forbesii</i>	16	3
<i>Cypripedium virens</i>	19	31
<i>Phalænopsis Esmeralda</i>	19	17
<i>Zygopetalum Mackayi</i>	20	18
<i>Masdevallia Lindeni</i>	20	Jan. 4
<i>" Veitchiana</i>	28	4
<i>Uropedium Lindeni</i>	Dec. 1	Dec. 25
<i>Odontoglossum victoniense</i>	3	30
<i>Cypripedium No. 10</i>	3	31
		1883
<i>Odontoglossum Rossii</i>	3	Jan. 8
<i>Cypripedium pardinum</i>	4	6
<i>Saccolabium violaceum</i>	7	15
<i>Gongora maculata</i>	8	1
<i>Odontoglossum Rossii majus</i>	17	6
<i>" gloriosum</i>	17	8
<i>Oncidium cucullatum</i>	18	15
<i>Comparettia rosea</i>	22	25

NAMES OF ORCHID.	FLOWERING	
	Com-menced.	Ended.
	1882	1883
Phalænopsis grandiflora	Dec. 26	Jan. 10
Saccolabium rubrum	30	17
Sophronitis violacea.....	30	15
	1883	
Arpophyllum giganteum	Jan. 4	Feb. 24
Lycaste costata	11	12
Colax jugosus	12	16
Phalænopsis Schilleriana	14	16
Odontoglossum maculatum.....	15	16
" Alexandræ	15	12
" tripudians	25	15
Cattleya Warscewiczii delicata.....	25	20
" maxima	Feb. 5	20
Dendrobium Pierardi	6	Mar. 6
Phalænopsis amabilis	10	5
Odontoglossum Dawsonianum	12	6
" Cervantesii	15	15
Cypripedium calophyllum	15	Apr. 15
" villosum	15	May 15
" Dayanum	17	16
" concolor	20	Apr. 16
" Chantinii	Mar. 1	10
Selenipedium Haynaldianum.....	1	May 25
Miltonia cuneata	3	Mar. 21
Cypripedium superciliare	8	Apr. 25
Ada aurantica	8	Mar. 28
Dendrobium densiflorum.....	8	20
" Wardianum	8	Apr. 1
Cattleya citrina.....	10	10
Stanhopea oculata	15	Mar. 25
Oncidium flexuosum	19	Apr. 20
Dendrobium Cambridgeanum	24	21
Masdevallia towarensis	24	8
" Chimæra	24	12
Epidendrum amabile	25	30
Cypripedium Boxallii	30	26

The reader will notice, says M. Petot, that each month of the year furnishes its contingent of flowering species, as well in winter as in summer ; and if some few are ephemeral, there are others, like the Selenipediums, which continue to furnish blossoms for several months without stopping. Those persons, therefore, who have the slightest accommodation, if they wish always to have something in flower, should cultivate Orchids. There are species of all temperaments—those that are adapted to ornament a hothouse, as well as a temperate house, a cold house, or even a humble orangery.

THE OLD ASH-LEAF POTATO.

HAVING secured a good and true sample of old Ash-leaf Kidney Potato this year, I find it has done better than many other kinds which are greatly lauded for earliness and good quality. Our first lifting was during the third week in June, from a rather dry and sheltered border,

and the quality was equal to that of any crop we ever grew.

This old Ash-leaf Potato is a kind which has become very scarce, and is seldom seen quite true. Wherever a stock has been secured, it should be carefully harvested, and then the possessor will be sure of one first-rate early potato. For forcing in pots, pits, and frames, I have never found any kind to surpass the Ash-leaf.—M. T., *Stirlingshire*.

FRENCH BEANS—FORCING.

THE best Kidney Bean for forcing (among a number of well-known good kinds which have been tried) has frequently proved to be Osborn's. The abundant crop, the good setting properties, and the fine quality has established it as a general favourite. A mistake frequently committed when forcing early, is the using of too large pots, with insufficient drainage. Close rich soil is also an evil, which leads to failure. What may suit well in spring and early summer often proves very objectionable during December and January. Whenever we have an opportunity to plant French Beans out into pits with bottom heat, we eagerly turn such advantages to good account. By this system, as compared with the old practice of pot culture, we secure many more Beans, the quality is better, and the labour of watering is materially reduced—a light or two planted every ten days or so gives a good and regular supply.—M. T., *Stirlingshire*.

THE NATIONAL ROSE SOCIETY.

THIS Society held its Metropolitan Show on July 3rd, in the Royal Horticultural Society's great tent at South Kensington. The exhibition was a fairly good one notwithstanding the trying weather which had preceded it, and many charming blooms were exhibited. It is computed that about 10,000 blooms were staged. In the Nurserymen's Class the premier bloom—Mons. Noman—was shown by Mr. B. R. Cant, of Colchester, who had also the best Nurserymen's Tea Rose, a splendid bloom of Souvenir d'Elise. Mr. Cant also won the highest prize, that for 72 single trusses, for the third time in succession. A. Slaughter, Esq., of Steyning, secured the 60 guinea champion trophy, which he holds for

this year. In the Amateur's section the champion bloom amongst the Teas was Jean Ducher, shown by Mr. Brown, gardener to A. J. Waterlow, Esq., Reigate. The Society's medal for the best new Rose was worthily won by Her Majesty, shown by Mr. H. Bennett, of Shepperton, and already figured in our volume for 1880. This is a splendid Rose with full massive flowers of the most delicate bright pink colour. We are glad to find this Rose thus handsomely recognised, as it has been thought that some of the other interesting varieties brought forward by the same raiser have had scant justice done to them.

We have not space to publish the entire prize list, but have thought an alphabetical list of the names of the varieties which won the first prize in the three principal classes, namely, the Nurserymen's, 72 singles, taken by Mr. B. R. Cant, of Colchester, and 36 trebles, taken by Messrs. Paul & Son, Cheshunt, and the Amateurs' 36 singles, taken by A. Slaughter, Esq., Steyning, noting how often, according to the published reports, each sort had won in these classes, would be a useful guide in the selection of new varieties. The figures indicate the number of times each was shown in the three classes referred to.

H.P. Alfred Colomb, 2.	H.P. Duchess of Bedford, 2.
H.P. Alfred K. Williams, 3.	H.P. Duke of Connaught, 1.
T. Anna Ollivier, 2.	H.P. Duke of Edinburgh, 2.
H.P. Annie Laxton, 1.	H.P. Duke of Teck, 2.
H.P. Antoine Ducher, 1.	H.P. Duke of Wellington, 2.
H.P. Auguste Rigotard, 1.	H.P. Dupuy Jamain, 1.
H.P. Beauty of Waltham, 2.	H.P. Edouard Morren, 1.
H.P. Boieldieu, 1.	H.P. Egeria, 1.
H.P. Camille Bernardin, 1.	H.P. Emily Laxton, 1.
H.P. Captain Christy, 2.	H.P. Etienne Levet, 2.
T. Catharine Mermet, 1.	H.P. Ferdinand de Lesseps, 1.
H.P. Charles Lefebvre, 2.	H.P. Fisher Holmes, 2.
H.P. Clothilde Roland, 1.	H.P. François Michelin, 1.
H.P. Comtesse de Ludre, 1.	H.P. General Jacqueminot, 2.
T. Comtesse de Nadaillac, 1.	H.P. George Moreau, 1.
H.P. Comtesse d'Oxford, 1.	T. Innocente Pirola, 2.
H.P. Constantine Tretia-koff, 1.	T. Jean Ducher, 1.
H.P. Countess of Rosebery, 1.	H.P. John Bright, 1.
H.P. Dévienné Lamy, 1.	H.P. John Hopper, 1.
T. Devonensis, 1.	H.P. Julie Touvais, 1.
H.P. Dr. Andry, 2.	H.P. La Duchesse de Morny, 1.
H.P. Dr. Sewell, 1.	H.P. La France, 3.
H.P. Duchesse de Valombrosa, 3.	H.P. Le Havre, 1.
	H.P. Louis Van Houtte, 1.
	T. Madame Bravy, 1.

H.P. Madame Caillat, 1.	H.P. Marie Baumann, 3.
N. Madame Caroline Kuster, 2.	T. Marie Van Houtte, 2.
H.P. Madame Charles Wood, 1.	H.P. Marquise de Castellane, 3.
H.P. Madame Clémence Joigneaux, 1.	H.P. Maurice Bernardin, 2.
T. Madame Ducher, 1.	H.P. Merveille de Lyon, 1.
H.P. Madame Eugène Verdier, 3.	H.P. Mons. E. Y. Teas, 2.
H.P. Madame Gabriel Luizet, 3.	H.P. Mons. Noman, 1.
B. Madame Isaac Perière, 2.	T. Niphotos, 2.
H.P. Madame la Baronne de Rothschild, 2.	H.P. Olivier Delhomme, 1.
H.P. Madame Lacharme, 1.	H.P. Penelope Mayo, 1.
H.P. Madame Marie Finger, 1.	T. Perle de Lyon, 1.
H.P. Madame Marie Verdier, 2.	H.P. Prince Arthur, 2.
H.P. Madame Prosper Laugier, 1.	H.P. Princess Mary of Cambridge, 1.
H.P. Madame Victor Verdier, 1.	H.P. Reine du Midi, 1.
H.P. Madame Vidot, 1.	H.P. Reynolds Hole, 1.
T. Madame Willermoz, 1.	T. Rubens, 1.
H.P. Mdlle. Julie Dymonier, 1.	T. Souvenir d'Elise Vardon, 3.
H.P. Mdlle. Marie Co-intet, 2.	B. Souvenir de la Malmaison, 1.
H.P. Mdlle. Marie Rady, 2.	H.P. Souvenir de Mons. Boll, 1.
H.P. Marchioness of Exeter, 1.	T. Souvenir d'un Ami, 2.
N. Maréchal Niel, 2.	H.P. Star of Waltham, 2.
H.P. Marguerite de St. Amande, 3.	H.P. Sultan of Zanzibar, 1.
	H.P. Violette Bouyer, 1.
	H.P. Vicomtesse de Vezines, 1.
	H.P. William Warden, 1.

DIEFFENBACHIA REGINA.

AMONGST the many new forms of this genus introduced during the last few years this is one of the most interesting. It is distinct in character, and strikingly effective in its variegation, so that it may well bear the title of regina, or Queen of the Dieffenbachias. The stem is erect, but is not a rapid grower, and thus it remains for some time in a dwarfish manageable condition. The leaves are oblong elliptic, rounded at the lower end where they join the stalk, shortly acuminate, the surface being almost wholly covered with greenish white, mottled with blotches of pale green, and having a few streaky markings of dark green, with a narrow border of the same colour. It is the fact that the greater part of the upper surface is of the light hue just described, while the markings of a dark shade are comparatively few, which gives to this plant so elegant an aspect. The two sides of the leaf-blade are in this species nearly equal in breadth, so that a comparatively broad surface is displayed. It is a



DIEFFENBACHIA REGINA.

native of South America, and really a desirable addition to the shrubby group of Araceous stove plants. We are indebted to Mr. W. Bull, by whom it was introduced, for the use of the accompanying illustration.—T. MOORE.

BEGONIA DISCOLOR-REX.

ONE of the races of Hybrid Begonias which we owe to the well-directed work of the florist is that which bears the name above quoted. It comes from the crossing of the well-known *B. Rex*, a dwarf tuberous kind with beautifully variegated leaves, with *B. discolor*, an equally well-known kind, also known as *B. Evansiana*, which has tuberous roots, tall annual stems, and a profusion of pink flowers of a showy character. The hybrids combine handsome foliage with handsome flowers. They were originated some two or three years since by M. G. Bruant, of Poitiers, and there appears to be considerable diversity amongst the varieties.

M. Bruant points out in his recent catalogue the treatment which is best adapted to secure success in the cultivation of these novelties, and it may be useful to gather up the substance of his instructions. He says:—“These plants thrive if planted in peat soil, and may be grown in the greenhouse, or in frames, or in a favourable exposure outside during summer. Under these conditions, they attain in a short time considerable dimensions. Our two-year-old specimens are from 16 in. to 24 in. in height, with a nearly equal breadth; the tufts having a circumference of about 6½ ft. The plants were grown in the open air in summer, in an open shady situation, sheltered only by raised frames.

“During the winter these Begonias can either be kept in growth in a heated house, or put away entirely at rest in a dry place. It is preferable to grow on during the winter the young plants obtained by multiplications, and

to preserve in the dry state those only which have completed their development in the course of the summer.

"As an instance of their capability of resisting cold, we will quote the following fact:—About one-third of a lot of rejected seedlings which was left outside last winter without any covering, started into growth in the spring. These hybrids are therefore almost as hardy as *B. discolor*, while they have the brilliant lustre and markings of the hothouse Begonias."

THE NURSERY TRADE IN AMERICA.

THE method of distributing nursery stock in our country is perhaps the best under the circumstances, but is prolific of much dissatisfaction, and a fruitful source of frauds. The fruit-growers who have a personal acquaintance with the dealers who supply them with nursery stock are few indeed. Those who purchase stock year after year, with no guaranty that what they procure is true to name, or in any respect what they desire, are legion. The production and sale of all kinds of nursery stock is an enormous business in this country. A great many men and firms have large fortunes invested in the business, conduct their operations on a large scale, and have customers in distant States. Under these circumstances proprietors and their managers can have but a general oversight over their sale agents and deliverers, and no close oversight and supervision of the men engaged for this work.

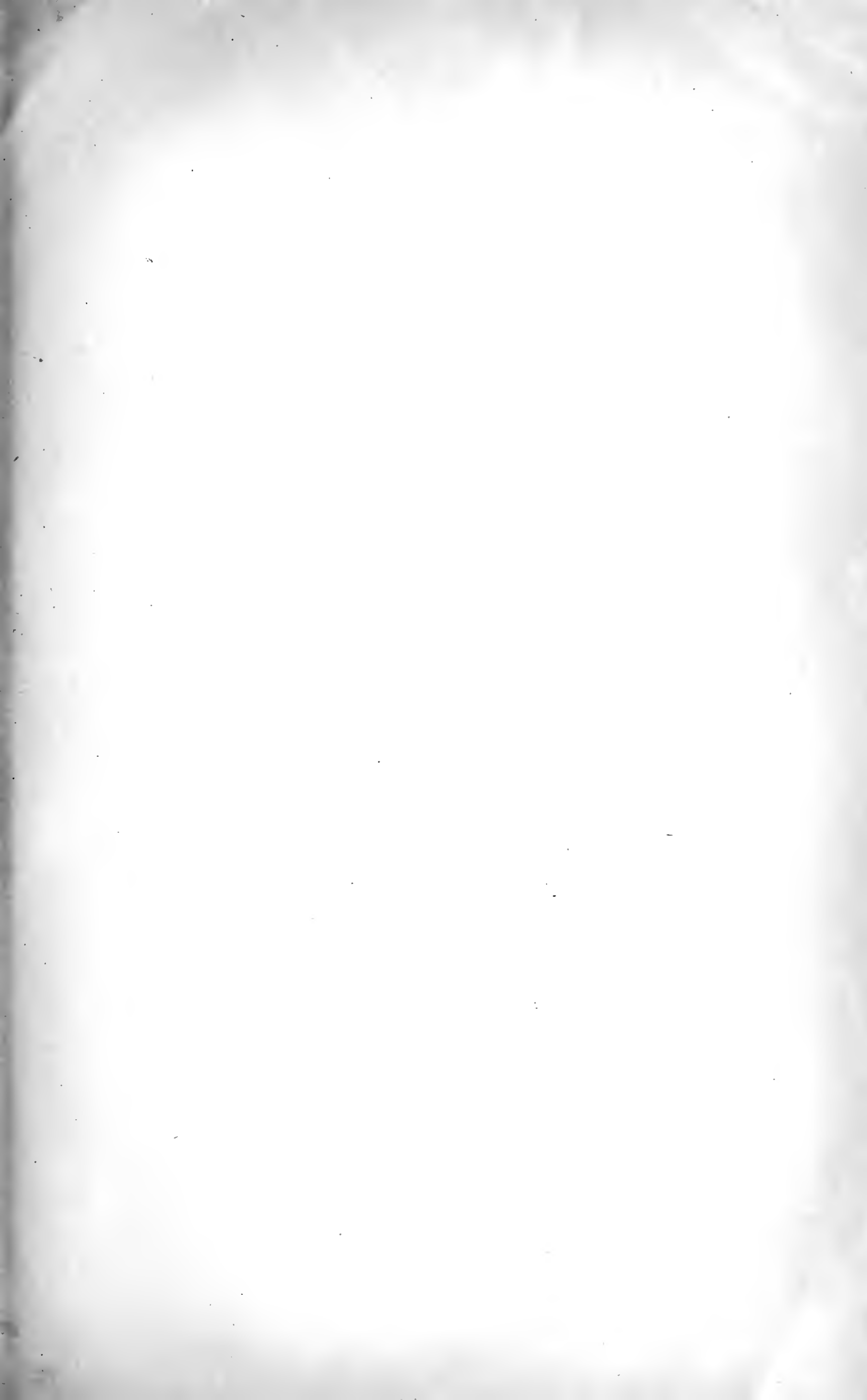
Much dissatisfaction has been caused by the course too often pursued by a very indifferent class of salesmen. The fruit-grower who buys a grape-vine, a berry-bush, or an apple-tree, usually has to wait several years before seeing the fruit of the vine, bush, or tree. Even the foliage or growing habit serves to determine the character of but few vines or trees, and to properly name the great majority we must wait for the fruit. A man purchasing from itinerant agents may have predilections in favour of certain varieties of fruit. Many agents have not the hardihood to disappoint the farmer under these circumstances, and too often an undesirable and worthless article is palmed off on the farmer, who is several years in discovering the wrong. I do not say that principals are parties

to these petty frauds; not at all; when committed they are wholly due to the cupidity of the agent, who is determined to sell. Nurserymen would best serve their own interests were they to adopt systematic measures to educate farmers in all that pertains to horticulture; to disseminate correct information in regard to different varieties; and lastly, to leave nothing undone in order to supply their customers with the best and most suitable varieties of the different fruits, true to name, and at reasonable prices.

I do not say that nursery stock in this country costs too much; indeed, when apple-trees can be procured for \$0.25 each, grape-vines for \$0.50 each, and gooseberries for \$2 per dozen, no one can grumble. But I do insist that salesmen are very careless. They are careless in another respect. Very often the farmer wishes to procure, from some conceit of his own, something which the agent knows, or ought to know, is unsuitable. The farmer should be informed of his error, and offered a suitable substitute. Such a course would be more honourable than to sell him that which he has blindly ordered. Nurserymen who by their agents sell trees or vines not true to name are, of course, liable for damages, but the farmer who has been mulcted usually pockets his loss. This whole matter is worthy the attention of nurserymen.
—FORREST K. MORELAND, *Ogsdenburg, N.Y.*

THE FUCHSIA AS A RAFTER PLANT.

VERY few plants are more general favourites with the public, or are more largely cultivated than the Fuchsia; and this is not surprising when we consider the great number of sorts there now are, how useful they are for decorating, how easily grown, and the length of time they continue in flower. The plants are generally grown as pyramids, or bushes, which forms answer for decorative purposes, but the Fuchsia is seen in its greatest beauty when grown as a rafter plant. It is not often that a person sees them trained in this way, but when well done they are very striking. They should be planted out in a compost of peat and loam with a little sand, and when they cover the length of the rafters the plants





will require top-dressing annually; they will also require to be watered occasionally with liquid manure. My neighbour, Mr. Jones, of Ribston Hall, grows a number of plants up the rafters of the conservatory there, and during the summer months the sight is truly beautiful. The profusion of flowers is something wonderful, and their gracefully drooping habit is seen to advantage. When the plants have done flowering in the autumn they should be pruned, and this will allow the admission of more light to the other occupants of the conservatory. The plants are easily increased by cuttings, and will thrive in the compost above recommended. — M. SAUL, *The Gardens, Stourton Castle, Yorkshire.*

AMERICAN MOTHER APPLE.

[PLATE 592.]

OF American origin, and one of the few American Apples that ripen well in this country. It is a dessert Apple, and as our figure shows, one of the handsomest of autumn-ripening sorts, being in use during October, or according to Scott, from October till February. There are other varieties bearing the name of Mother Apple, in consequence of which Dr. Hogg observes, "I have distinguished this as the American Mother Apple." The synonyms of Queen Anne, and the Gardener's Apple are attributed to it.

The following is the description given in the *Fruit Manual*:—"Fruit above medium size, conical, uneven, and undulating on the surface and generally higher on one side of the crown than the other. *Skin* golden yellow covered with patches and streaks of crimson on the side next the sun, and strewn with russet dots. *Eye* small, closed, and tapering, set in an open basin. *Stalk* half an inch long, very slender, inserted in a deep cavity. *Flesh* yellowish-white; remarkably tender, crisp, and breaking, very juicy, sweet, and with a balsamic aroma."

Our drawing was made in the autumn of 1882, from some well-grown specimens furnished by Mr. Alexander Dean, of Bedford, who has kindly supplied the following comments:—"It is unfortunate that an Apple of such undoubted high quality and excellent flavour should be such a shy bearer, and therefore only grown by those who, having

little care for the mere pecuniary aspect of Apple culture, are satisfied to get fruit of the best quality, even though not quite so freely produced as are Codlins or Wellingtons. The American Mother Apple is produced on a tree of robust habit, though the wood is short-jointed and stout. The reasons for wayward fruitfulness are doubtless to be sought in the comparative unsuitability of American sorts of Apples for our somewhat ungenial clime, one other kind, perhaps less known than the one under notice, the Northern Spy, proving to be peculiarly tender and shy.

"The fruits of the Mother Apple are rather above medium size, and usually show more of angularity than do the specimens which furnished the artist with material for his plate; but the coloration is faithful, as the skin, which is of a rich yellow, is in the sun heavily coloured with streaks and mottlings of deep red. The stalk is short and slender and the eye small and closed. The flesh is of creamy white hue, and is of that peculiar flavour not unfrequently called balsamic, and which signifies a very pleasant taste. It is an early Apple, being ripe in October. While so much stress is being laid on the production of big free cropping kinds that are needed chiefly to fill the market bushel, it would be well if some practical pomological hybridist would employ the American Mother Apple as a breeding parent upon some prolific sort, so that we may get perchance a race of kinds that are both of delicious quality and abundant bearers."—T. MOORE.

PALMS IN SMALL POTS.

THE fact that Palms may be successfully grown in comparatively small pots is perhaps not so completely recognised as it ought to be amongst cultivators.

It is, however, a matter of very great importance, as when the plants are in pots of limited size they can be used in many positions for which large pots would at once unfit them. They, moreover, in most cases do well with their roots somewhat confined, and are more apt to perish from a depression of temperature if their roots are in a mass of crude earth. A case strongly illustrative of this has been recently noted in Russia. In the Imperial Taurian Gardens at St. Petersburg, which are under the direction of Mr. Siessmeyer,

and are solely devoted to the cultivation of ornamental plants for the decoration of the interior of the Imperial Palace, it appears from a statement in the *Gardeners' Chronicle* (N. S., xix., 118) that the most important and most extensive department is that consisting of plants with ornamental foliage, in which the principal feature is the cultivation of luxuriant specimens in comparatively small pots. This is effected by rapid propagation, careful attention, and the judicious use of liquid manure. The masterpieces of all are the handsome specimens of Palms. Beautiful Palms are seen in other gardens, but nowhere else such fine plants in such small pots or tubs. Palms having trunks from 5 to 30 feet high, crowned with healthy foliage, are grown in tubs that are scarcely wider than the diameter of the trunk itself at the base. For the winter decoration of the palace thousands of plants, including Palms 30 feet high, have to be moved to and fro; and the smaller the pots the easier, of course, the transport.

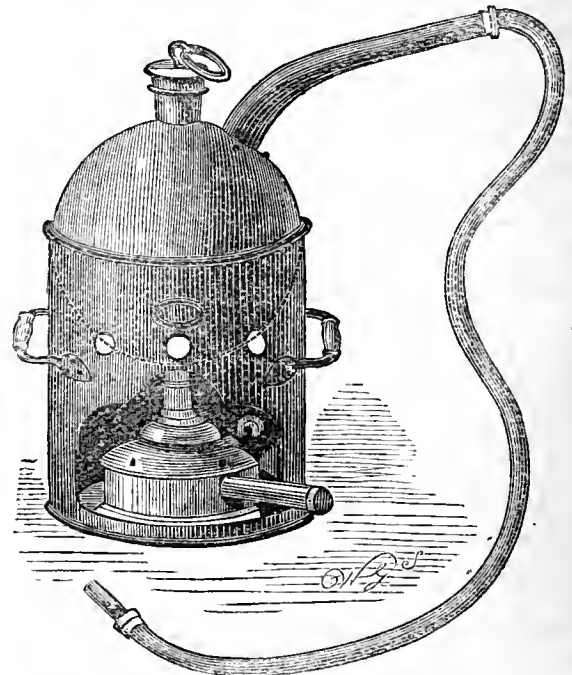
When the Palms are repotted, the roots are cut away from the bottom and sides of the ball without mercy, and after the operation the plants are placed in a moist shady house, in which a high temperature is maintained. Here they are kept and syringed once a day until they have formed new roots. Under this treatment the plants lose no leaves. After they become well rooted, repeated doses of manure-water are applied in the place of larger tubs.—M.

LANDRY'S VAPORISER.

AT page 65 we printed some remarks on the plan proposed by M. Boizard, of destroying insects on plants by means of nicotine vapour—the vapour of tobacco juice. But to obtain the vapour we need a vaporiser, and this is supplied by the utensil of which we annex a figure taken from the *Revue Horticole*, where M. Carrière observes that the effect of this insecticide is incontestable, and the method of procedure of the simplest kind, inasmuch as to obtain the vapour it is only necessary to heat the tobacco juice in a suitable vessel. A simple chafing dish, with a vessel to contain the nicotine suffices, but a special utensil, such as M. Landry's, is more convenient. The following

is a condensation of M. Landry's description:—

The apparatus is made of three principal pieces, the stove, the lamp or chafing dish, and the vessel or boiler. The stove, which is $7\frac{1}{2}$ in. wide and 12 in. high, is of iron and cylindrical in form, with two handles, sheathed by wood, to protect the hands when it is lifted from place to place. The lamp, which stands on the bottom plate, is introduced by means of an opening at one side; it is of white metal, and fed with wood-spirit (*esprit de bois*). The boiler is made of copper, and is spherical in form, composed of two pieces soldered together horizontally, so that a little edge or rim is formed which lodges on the top of the stove. The lower half of the boiler is thus contained within the stove, hanging at a convenient level to be acted on by the flame of the lamp, and the upper half is exposed; on this upper part there is at top an opening for the introduction of the liquid, which opening can be closed by means of a brass screw top, or as effectually and more economically by a cork; and beside it is a tube for the emission of the steam or vapour, and to which when required can be attached a short flexible india-rubber tube provided with a nozzle to facilitate its introduction into a frame or glass case.



The capacity of the little vessel or boiler is about $2\frac{3}{4}$ quarts, but it is not necessary to put in more than one quart of the nicotine, and twenty minutes will suffice to convert this latter into vapour, the hourly expenditure being somewhat under $\frac{1}{3}$ of a quart of liquid. The lamp, which contains about a pint, consumes per hour nearly $\frac{1}{4}$ of a quart of the wood-spirit. When the whole is in order a quarter of an hour suffices to fill with vapour a glass case (vitrine) measuring about a cubic meter.

This apparatus has nothing absolute in its form or its dimensions, since any kind of chafing dish, or any kind of vessel adapted for the purpose can be used; but the utensil here described fulfils the necessary conditions advantageously.

We must now point out the manner of procedure to arrive at good results. Although the nicotine steam does not injure the vegetable tissues, it may be noted that it is a good plan to dilute nicotine with at least half its bulk of water. There is not only economy in doing so, but the vapours of nicotine and of water combined act almost as energetically on the insects as that of pure nicotine, and do not in the least affect vegetation. On the other hand, as water has a greater tendency to evaporate

than nicotine, which is denser, it follows that the liquid has a tendency to become thickened: hence it is necessary to stir the liquid now and then, adding a little water if requisite. If these precautions are neglected, one gets, instead of a watery vapour, an overheated coaly vapour, which may damage the plants.

The vaporisations are of two kinds, *preventive or hygienic*, that is, effected from time to time, weekly or fortnightly, according to need; and *curative*, as when there are many insects to destroy, in which case it is well to repeat the operation frequently, say at intervals of twelve or twenty-four hours. Generally speaking, it is better to repeat the operation oftener, and to make it lighter.

A few hours after the house has been vaporised, when the effect is produced, it is necessary to syringe the plants with cold water, avoiding the wetting of the flowers when they would suffer from it. This applies to cases where one wishes to vaporise a whole house; but as it frequently happens that certain single plants only are attacked by insects, and require to be dealt with, it is convenient to have a glass case, larger or smaller, where they can be separately treated. It is in such cases that the caoutchouc tube comes into requisition, and is introduced by means of a small aperture in the bottom or side of the frame, an aperture which is opened and closed when necessary by using a bung of moss, or cork, &c. When a general vaporisation takes place, the caoutchouc tube is not wanted, but the vaporiser is placed within the house, and, if the latter is large, its position is changed from time to time, so to regulate the distribution of the vapour that all parts of the atmosphere may be equally saturated.—(*R. H.*, 1883, 306.)

MR. BARLOW'S TULIPS.

THERE can be no doubt that Mr. Barlow has now the finest collection of Tulips in Europe, the result of many years' selection. It is not so much that he has raised seedlings as that he has from time to time been enabled to add to his Tulips very promising batches of breeders raised by others, and from these not a few gems have been obtained. If, however, there be a deficiency in that fine outline so much prized by the Lancashire florists, if the breeder colour flashes up into and weakens the beam, if the white base of the byblœmens or rose be stained with yellow, or the yellow base of the bizarre with dark, if there be a tendency on the part of the filaments to become foul, they may be relegated to a trial bed for another season's experience, but many a variety with some fine quality or qualities, yet shadowed by defects that are regarded as permanent, has to be cast aside.

The Tulip is a flower with a remarkable individuality of character, and it requires to be thoroughly known in order to be intelligently understood. It not infrequently happens that a flower will open with a clouded base, but it speedily bleaches to a pure bottom, and in these cases a knowledge of the variety is required. It is a flower constantly liable to fluctuations of character; it is not a little un-

certain in development, but it is at the same time full of marvellous interest. A period of five or more years must generally elapse before a seedling Tulip is strong enough to flower; it then almost invariably takes the breeder or self-coloured form, and from one or two to five or six and more years occur before it becomes rectified, *i.e.*, breaks into character. A raiser of seedling Tulips needs, therefore, to exercise consummate patience, and exist in an atmosphere of hope and expectation. Every year some breeders become rectified, and prizes or blanks are scored as the flowers display fine or indifferent characters.

This season Mr. Barlow has four beds, three of the beds containing about 140 rows of seven flowers each; the other is a bed of mixtures, from which the good flowers are selected as they can be recognised. The best bed contains the very choicest selection that can be made, though a few are discarded annually, others taking their places at planting time. The breeders are generally planted together, and in this state they are always of strong growth, producing large and striking, and in the cases of the roses and byblœmens especially, beautiful flowers. When they become rectified, both height and size are frequently reduced. It by no means follows that a fine breeder will be as beautiful, and of such fine quality in the broken as in the breeder state; and one could almost wish, in the face of this contingency, that some never would become rectified, and so much beauty become lost; but as it is the ultimate end of the breeder to become swallowed up in the broken stage, the law of its existence must be submitted to.

Mr. Barlow has been exceptionally strong in feathered flowers this season. Of feathered byblœmens, the following were very fine:—Bessie, rather small in size, pure in the base, and beautifully feathered with dark; Mr. Jackson, broken by David Jackson, of Middleton, the feathering regular and unbroken, the colour rich glossy raven black on a pure white ground—a flower of great beauty, and the queen of the feathered byblœmens. Mr. Cooper (Boardman), a comparatively new flower, pure in base, and handsomely feathered with dark; Mrs. Bentley (Green), a distinct and very scarce flower, beautifully feathered, and highly attractive; and Alice Gray, finely feathered with brownish-black, the base pure, and form fine.

Of feathered roses, Industry stood out with a marked individuality: it was in beautiful character all over the beds, very pure in the ground, feathered with rich dark scarlet; Martin's 101, a variety generally beautifully feathered, but deficient in shape, the colour clear pale maroon; and Nanny Gibson, very rich in colour, quite a scarlet, fine in the ground, very fine and striking.

Feathered bizarres are more numerous than the varieties in either of the foregoing sections. Garibaldi, particularly noticeable, came from an Adonis breeder, and is beautifully feathered with dark; George Hayward is an old but fine flower, with a pure golden ground, and feathered with a dark crimson-maroon: it was in fine character, though an uncertain flower, as the feathering generally runs wild; Storer's William Lea, clear golden ground, fine dark bronzy-maroon feathering; General Grant (Hepworth), a new flower in the class of Orion; and Dr. Hardy, a magnificent Tulip, the deep golden ground very fine, and the feathering rich scarlet, probably unsurpassed for its richness of colour; Masterpiece, deep yellow ground—very fine and handsomely feathered; William Wilson, a break from Masterpiece—very fine in character; Ashmole's Lord Raglan, pure golden ground, finely feathered with brownish-crimson; Lea's No. 1, very fine and promising—quite a scarlet feather; and Sir J. Paxton, remarkably good in its feathered character.

Of flamed flowers, the leading ones in the bizarre class were Excelsior, a seedling of the late Dr. Hardy's, supposed to have come from Masterpiece, finely marked in the beam and feather, and pure in the ground; Storer's No. 4, a new break, a beautifully marked flower, remarkable for its solid beam; and Sir J. Paxton, though not so good as usual, yet a most useful and reliable variety.

Of flamed roses, Annie McGregor was perfect in marking and shape, very fine in all respects—a very old flower, raised many years ago by the late Mr. Lawrence, of Hampton—very fine indeed, and as perfect as one could well desire; Lady Sefton, very lovely in colour and pure in the ground; and Mabel, very pretty and striking, solid in the beam and fine in colour.

Of flamed byblœmens, Talisman, raised by Dr. Hardy, is undoubtedly one of the best in cultivation, pure, rich in colour, and most handsomely marked; Duchess of Sutherland, a fine old flower, raised, it is believed, by the late Mr. Groves, and distributed by Mr. Turner: still very good indeed, though thin in the petal; Adonis, a most useful and reliable variety; and Friar Tuck, also very fine, a rosy byblœmen coming near to the rose section in point of colour.

And what can be said of the splendid collection of breeders? It is impossible to do justice to their superb beauty. Of bizarre breeders, the following are conspicuously fine:—Excelsior, Sir J. Paxton, William Lea, Horatio, brilliant scarlet; Abe Lincoln, Ashmole's Seedling and Storer's No. 4. Of byblœmen breeders, Glory of Stakehill, delicate mauve, very beautiful; Adonis, Talisman, and Elizabeth Gill, a Wakefield seedling. Roses:

Mrs. Barlow, Annie McGregor, Lady C. Grosvenor, Miss Burdett Coutts, and Modesty.

It must be recorded that Mr. Barlow is no miser in the matter of his rich floral treasures in the way of Tulips. Many a young beginner has received from him substantial help in the way of a present of some choice varieties with which to essay the rôle of a cultivator and exhibitor, and there is scarcely a cultivator whose collection at some time or other has not been enriched by a contribution from Stakehill.—(*Abridged from Gardeners' Chronicle.*)

PROTECTING ROSES.

DWARF Roses when unprotected often suffer severely from frost at the junction of stock and scion, and do not show much of the real mischief till growth becomes active, in April or May. A good coating of manure placed over the roots and well packed round the collars is very beneficial; and over all an inch or two of soil may be placed, which keeps the goodness in the manure, and also helps to ward off severe frosts. Twigs of Evergreens deftly placed round the plants, giving the appearance of neat shrubs, afford an excellent protection. In the case of two fine borders of newly-planted Roses, we placed Holly branches compactly round the plants, which kept them entirely uninjured, while on a third border, without such protection, they suffered severely down to the ground level. The Holly began to shrivel as the season advanced, and when danger from frost was past all was cleared away, and the Roses were left quite sound.—M. T., *Stirlingshire.*

THE PELARGONIUM SOCIETY.

THE Annual Show of this Society was held at South Kensington on June 26. Notwithstanding the trying weather the display was on the whole very good, though not equal to that of last year, one principal exhibitor having dropped out of the ranks, and the efforts of another from some cause or other being much crippled. The Society must, we think, give up the exclusive principle of allowing only subscribers to compete, and throw open the competition to outsiders also, if the quality and interest of its shows are to be kept up.

Class 1 for HYBRID PELARGONIUMS brought no competitor. We hope nevertheless there may be some growers at work in this direction, so that we

may get a new type of flowers of this popular genus. The oak-leaved and cut-leaved sections alone afford abundant material, all that is required being a little well-applied manipulation in cross fertilisation, and a fair amount of patience and perseverance. A good result must in due time follow. No hybrids with *Geranium pratense* or *sanguineum*, or with *Pelargonium oblongatum*, as one parent, though specially asked for, were forthcoming, but the Society should keep up the offer.

Class 2 for NEW LARGE-FLOWERED PELARGONIUMS, was fairly represented, though many prizes were withheld, it being a rule that new varieties should show a decided advance in quality, or in novelty of colour, to gain an award, and this rule the judges with commendable firmness kept steadily before them. For 3 sorts E. B. Foster, Esq., Clewer Manor, was 1st with Brilliant, rich bright orange deepening to scarlet, and small dark blotch on top petals, a showy variety of good form; Diadem, lively orange, slightly shaded with dark, the dark top petals edged with orange, and the throat white; and Adventure, a large flower of splendid shape, clear pink, with slight pencillings of crimson, and dark top petals. For 2 sorts, Mr. C. Turner, Slough, entered Pioneer, brilliant orange-salmon, with clear white throat; and Confessor, orange-pink, slightly blotched with dark, and with dark top petals, but no award was made. For one variety, Mr. Wiggins, gardener to H. Little, Esq., Hillingdon Place, was 1st with Mrs. Little, pure waxy white lower petals, dark top petals, the blotch shading off to bright rose, of dwarf stocky habit, novel and distinct; this was also awarded the Society's 1st-class Certificate of Merit.

Class 3 for NEW SMALL-FLOWERED (FANCY) PELARGONIUMS included only one entry for 3 sorts by Mr. Turner, who showed Butterfly, pale in colour, the lower petals white with pink spot, the upper deep pink; Cherry Ripe, pale rosy-pink shaded with magenta, with white centre; and Irene, a very pretty and distinct pale fancy of a pleasing character, the lower petals pink with rosy spot, the upper deep rose, very promising, but no award was made.

Class 4 for NEW LARGE-FLOWERED PELARGONIUMS of the decorative or market type, was better represented. For 3 sorts Messrs. J. & J. Hayes took 1st prize, staging Formosum, a brilliant deep orange variety dashed with pink, and light centre; Fanny, delicate pink, with dark blotch on the top petals, and the edges slightly fringed; and Bouquet, pure white, pencilled with deep rose at base, both of compact habit, very free, the latter with the edges of the petals much fringed. Mr. Wiggins had Rayonette, Pink Perfection, and Mauve Queen, all useful and pleasing sorts. M. Victor Lemoine, Nancy, also exhibited three seedlings. For 2 sorts Mr. W. Brown, Hendon, was 1st with two bright-looking varieties of his own raising, viz., Lustrous, clear pale red, deeper in the top petals, very bright and pleasing; and Beacon, also pale red, darker than the foregoing, good in form, and very free. For one sort the award was made to Mr. Turner, who had Dresden China, with its curious and spotted white flowers, stained and flaked with pale rose; Mr. Wiggins had Rosette, pale pinkish-red, poor as shown.

Classes 5 and 6 for NEW ZONAL PELARGONIUMS was also poorly filled, and the varieties were not up to the mark. There was one exhibit of three, but no award; no entry for two; while for one, the best shown was Miss Alice, from Mr. J. George, Putney, a clear deep pink of showy character, but not considered an advance. Of DOUBLE-FLOWERED ZONALS there were a few exhibits, but no prize was awarded. In the section for one sort, Messrs. Saltmarsh & Sons, Chelmsford, staged Baron Pollock, clear pale orange-rose. The Pelargonium Society's First-class

Certificate of Merit was awarded to La Cygne, a fine double white of good form and fine truss—a variety of Continental origin, exhibited by Mr. J. Bealby, Rochampton.

Classes 7 and 8 for NEW IVY-LEAVED PELARGONIUMS was but poorly filled, and no awards were made. M. Victor Lemoine showed three double varieties—La Rosière, pale pink, and Jeanne d'Arc, blush, both promising, though not in good condition; and Mr. J. George had a single-flowered, Future Fame, in the way of Masterpiece.

Classes 12 and 13 for SPECIMEN LARGE-FLOWERED PELARGONIUMS brought out Mr. Turner and Mr. Wiggins, the former taking the lead. Mr. Turner's half-dozen, in 8-inch pots, consisted of well grown and admirably flowered examples of Victory, Despot, Modesty, Mountaineer, Archduchess, and Amethyst—the latter being superbly bloomed, and awarded the Royal Horticultural Society's Silver Banksian Medal as the finest Pelargonium in the exhibition. Mr. Wiggins had fairly good plants, of which the best was Claribel, one of the finest of the light sorts, and Illuminator, the brightest of vermilion scarlets, set off by a clear white centre. The half specimens both of Mr. Turner and Mr. Little were very good, and being shown in groups of eighteen, provided glowing banks of colour. Mr. Turner's lot included Amethyst, Rob Roy, Martial, Fortitude, The Baron, Morning Light, Joe, Monarch, and the bright hued scarlet Sunbeam, with sundry newer sorts, as Cornet, orange-scarlet with maroon upper petals; Royal Review, rich crimson with dark upper petals edged with crimson, of perfect shape, and one of the finest of all the show flowers; Statesman, rose colour with dark top petals and white centre; and Zealot, a bright scarlet of fine shape.

Class 14 for SMALL-FLOWERED or FANCY PELARGONIUMS was also filled by Mr. Turner and Mr. Wiggins, and the plants, which averaged about a yard in diameter, were, if possible, more floriferous, and the competition closer. Delicatum, a lovely white, with rose blotch, was magnificently shown in both groups. Mr. Turner's other sorts were Lady Carington, Mrs. Pope, Mrs. Pottle, Pilgrimage, and Nellie Fordham; while those from Hillingdon included Polar Star, Duchess of Edinburgh, Mrs. Hart, Emily Little, and Pilgrimage.

Classes 15 and 16 for DECORATIVE, REGAL, or FRINGED PELARGONIUMS brought out a grand lot. In the group of six plants Messrs. J. & J. Hayes, Edmonton, were first with finely bloomed plants of Gold Mine, a splendid new glowing scarlet; Mrs. Bradshaw, Garibaldi, Maggie Improved, Lady Isabel, and Duchess of Bedford. Mr. Wiggins was placed second, and Mr. Turner third. In the groups of eighteen smaller plants Messrs. Hayes were again first with a very fine group, turned out in the best market style, and forming one of the finest features of the show; the varieties consisted of Black Prince, Volonté Nationale, Decorator, Emma, Madame Marie Knecht, the best of the pure whites; Harlequin, Robina, Garibaldi, Marie Milet, Metallicum, Maid of Kent, John Bright, Digby Grand, Mons. Boucharlat, Gold Mine, Delicatum, Mrs. John Hayes, and Formosum. In a collection from Mr. W. Brown, Hendon, was a variety named Flirt, a sportive sort, part of whose flowers are deep rose, with dark maroon blotch on the upper petals, and part bright salmon red with blackish blotch.

Classes 17 and 18 were for ZONAL PELARGONIUMS, of which the finest examples, both of sixes and eighteens, were shown by Mr. Weston, gr. to D. Martineau, Esq., Clapham Park. The first prize half-dozen were most creditable to the grower, and included Rosamond, pink; Lucretia, white; Rev. F. A. Atkinson, crimson; Hettie, rosy-scarlet; Laura Strachan, salmon; and Lizzie Brooks, scarlet.

In this class Mr. W. Meadmore, Romford, was second and Mr. Wiggins third. Mr. Weston's eighteen included Fanny Catlin, Sophia Birkin, Hettie, Rev. F. A. Atkinson, Lizzie Brooks, Circulator, King of Bedders, Hébé, Ouida, Laura Strachan, Mrs. Parker, Jeanne d'Arc, May Fytche, Charles Schwind, Tom Bowling, Gnome, and Titania; and in this class Messrs. Saltmarsh & Son, Chelmsford, were second, and Mr. Wiggins third. The class for half-a-dozen double-flowered zonals was poor, and the first prize was not awarded, but the second was given to Mr. Meadmore, Brentwood, who showed *Député Varroy*, Noemi, Littré, Roi de Violettes, Azim, and Souvenir de Carpeaux; but though the plants were much smaller, there was much novelty and quality among the eighteens, with which Messrs. Saltmarsh & Son, Chelmsford, were first, Mr. Wiggins second, and Mr. W. Meadmore third. In Messrs. Saltmarsh's group was *Duchess of Albany*, a fine pink.

In the class for nine Ivy-leaved varieties Mr. Wiggins showed good-sized columnar-trained plants, very freely bloomed, amongst them being *Gloire d'Orléans*, double rose; *Perle*, double lilac; *Anna Pfitzer*, semi-double, rose-pink; and *Madame Emile Gallé*, semi-double, violet tinted pink.

The classes for CUT BLOOMS of Pelargoniums were well represented, and had an extraordinary illuminating effect on that part of the tent in which they were placed, the colours being intense and of glowing brilliancy. The principal prizes were taken by Mr. C. Turner, Messrs. Cannell & Sons, Messrs. Saltmarsh & Son, Mr. Wiggins, and Mr. George.

REGISTER OF NOVELTIES.

NEW FLOWERS.

BEGONIAS (*Tuberous-rooted*).—*Prince Albert Victor*, a very fine double-flowered variety with large rosette-like blossoms of a bright cherry crimson colour; very free and excellent habit; Laing & Co. *Zenobia*, a double-flowered form, bearing large full flowers of a deep crimson colour; large, full, and good form; Ernst Benary. *Orange Giant*, a very fine single form, raised by Mr. Barron at the Chiswick Gardens; flowers very large, stout, of good form; the colour vivid vermilion scarlet; extra fine; R.H.S. The foregoing received Certificates from the R.H.S. on June 26. *Goliath*, a double-flowered variety with very large blossoms, in size approaching a double Hollyhock; the flowers four inches across, and of a vivid blood-crimson colour; dwarf habit, extra fine; 1st-class Certificate R.H.S., July 10; J. Bealby.

DELPHINIUM, *Dick Sand*.—A very fine variety bearing tall, commanding, and striking spikes of large semi-double flowers, of a very deep violet purple colour, extra fine; 1st-class Certificate R.H.S., June 26; J. Bealby.

LILIUM *Sovitzianum pallidum*.—A distinct and beautiful Lily, differing from all the forms of the species in the flowers being of a very pale yellow copiously speckled with purple; 1st-class Certificate R.H.S., July 10; G. F. Wilson, Esq.

LOBELIAS.—*Prima Donna*, a dwarf bedding variety of the *compacta* section, and distinct in point of colour, the latter being deep puce purple, or maroon crimson; very free and attractive; 1st-class Certificate R.H.S., July 10; Carter & Co. *Florrie Wood*, also a dwarf and compact growing bedding variety with white flowers, and regarded as an advance on all previously shown; 1st-class Certificate R.H.S., July 10; H. James. *Swanley Blue*, another bedding variety of the *speciosa* type, a compact grower, forming dense tufts of turquoise blue flowers; one of the best of the section; 1st-class Certificate R.H.S., July 10; Cannell & Sons.

MILLA biflora.—A rare and beautiful Mexican bulbous plant, an old introduction but seldom met with, especially in flower; very distinct looking, having grassy foliage and tall flower stems carrying white star-like flowers some two inches across, having remarkably long slender tubes; 1st-class Certificate R.H.S., July 10; T. S. Ware.

NEMOPHILA *atomaria atro-cœrulea*.—A variety having bright azurean-blue flowers, the centre white, circled by a zone of black; a very distinct and pretty variety; 1st-class Certificate R.H.S., July 10; Carter & Co.

PELARGONIUM, *Abel Carrière*.—One of the Ivy-leaved section, with perfect double flowers produced in massive trusses and of a glowing cherry rose colour; very fine and attractive; 1st-class Certificate R.H.S., July 10; Cannell & Sons.

RHODODENDRON, *Diadem*.—A new variety of the Javanese section raised at the Chelsea Nurseries; the truss is large and well-filled, and the flowers of a bright orange scarlet colour are bold, and of good form; 1st-class Certificate R.H.S., June 26; Veitch & Sons.

ROSES. (H.P.)—*Heinrich Schultheis*, a new variety with large and full flowers of very fine shape and substance, and of a rich rosy pink colour. *Mrs. George Dickson*, also an H.P., with good-sized blooms of a delicate pink colour, full of massive well-rounded petals; 1st-class Certificates R.H.S., July 10; Henry Bennett. (H.P.) *Violette Bouyer*, a new French variety in the way of *Madame Lacharme*, the flowers large and full and almost pure white, delicately suffused with blush; 1st-class Certificate R.H.S., July 10; W. Paul & Son, and J. House.

VERBENAS.—*Compacta*, large well-formed pips of a bright purple colour borne on long conical trusses; fine and distinct. *Delicata*, soft mauve pink, finely formed stout pips and bold trusses. *Fantastic*, pink flaked with crimson, a very fine and distinct striped variety; and *Mabel*, delicate pink, stout well-formed pips and fine symmetrical trusses; 1st-class Certificates to the foregoing, R.H.S., July 10; W. H. Stacey.

NEW PUBLICATIONS.

L'ILLUSTRATION HORTICOLE (6 liv.) contains *Oncidium concolor*, Hook. [t. 487] a well-known Brazilian species with clear yellow flowers. *Impatiens Sultanii*, Hook. f. [t. 488], a free-growing succulent-stemmed branching plant producing a profusion of bright red flowers, and likely to be a useful decorative plant as it becomes better known and is less eoddled; it is from East Tropical Africa. A double coloured plate in the same number represents an artificial cascade.

GARTENFLORA for June contains *Echinosperrum marginatum macranthum*, Regel [t. 1119], a very pretty hardy Boraginaceous annual which is best treated as a biennial and sown in August. It is of herbaceous character, growing two and a-half feet or more in height with lanceolate hairy leaves, and through the whole length of the stem bearing abundant axillary simple scorpioid racemes of pretty forget-me-not-like blue flowers; St. Petersburg.—*Pellionia Daveauana*, N. E. Brown [t. 1120], a pretty variegated-leaved trailing stove plant, from Cochinchina, belonging to the Urticaceæ.—*Zygadenus Nuttallii*, Watson [t. 1121, fig. 2], a neat Melanthaceous bulb with stems a foot to a foot and a-half high, having linear-oblong erect leaves, and a loose terminal raceme of small white starry flowers. N. W. America at an elevation of 6,000 ft. on the Sierra Nevada.—*Zygadenus muscitoxicum*, Regel [t. 1121, fig. 1], a N. American herbaceous perennial, better known as a *Melanthium* or *Helonias*; it is a half hardy perennial, with broadly subulate channelled recurved leaves, and an oblong crowded spike of

white flowers, the flowers becoming greenish as they wither.

JOURNAL DES ROSES (July) contains a coloured plate of *Tea Rose Madame Azélie Imbert*, a large yellow rose of good form, with the edges of the petals recurved and paler, and the centre full, with a flush of salmony-red which also occurs on the exterior of the bud. This Rose was raised by M. Levet père, of Lyons, from Madame Falcot, and was put into commerce in 1870, so that it is now well known and fully appreciated.

THE GARDENERS' CHRONICLE (June 23—July 7) contains, *Masdevallia Carderi*, Rehb. f. (p. 784), a species allied to *M. Houtteana* with vegetative organs like those of *M. Chimæra*, but very small, and having short fleshy flowers which are whitish outside, ochre-orange at the base, with a blackish mauve-purple zone above, and long yellow tails spotted with blackish purple, the interior surface clothed with short ferruginous hairs; the petals are linear, the lip pandurate; Shuttleworth & Carder.—*Masdevallia tridactylites*, Rehb. f. (p. 784), is a lovely gem of the lovely triaristella group, with caespitose stems bearing semiterete acute channelled leaves, and capillary pedicels supporting the curious flowers, which have the upper odd sepal yellow, and the lateral connate navicular ones brownish purple, having "sigmoid blunt upright orange tails"; the small petals are white, and the lip purple at the base, white in front; W. Lee, Esq.—*Odontoglossum odoratum striatum hemileucum*, Rehb. f. (p. 784), a lovely variety with the disc of the petals and the whole of the lip of the purest white, which forms a fine contrast to the yellow portions, the cinnamon blotches and stripes being well developed; Heath & Sons.—*Colax jugosus rufinus*, Rehb. f. (p. 784), a variety in which the sepals are pale yellowish green, the petals full of very small blackish-purple speckles, and cinnamon instead of blue-mauve markings on the lip; W. Lee, Esq.—*Cypripedium pubescens*, Willd. (p. 784, fig. 128), a good woodcut illustration.—*Ranunculus amplexicaulis*, Lin. (p. 788, fig. 129), a well-known hardy perennial.—*Othonna cheirifolia*, Lin. (p. 789, fig. 130), an old-fashioned greenhouse shrub, from Algiers.—*Oncidium nigratum*, Lindl. (p. 790), an old but little known species, with ancipitous shining green pear-shaped pseudobulbs, ligulate acute leaves, and panicle flowers with linear-lanceolate much undulated sepals and petals, white with blackish purple blotches, and a blunt triangular yellowish lip with a few light cinnamon spots; Veitch & Sons.—*Polemonium Richardsoni*, Graham (p. 793, fig. 132), a hardy blue-flowered perennial, introduced many years since.—*Calanthe Forstermanni*, Rehb. f. (p. 814), a tall plant, with petiolate oblong-lanceolate acute leaves, three feet high, and bracteate penduncles bearing a dense cylindric raceme of yellow flowers, with a whitish-yellow reniform lip and a clavate spur half as long as the ovary; Birmah; F. Sander.—*Saccolabium Berkeleyi*, Rehb. f. (p. 814), a species intermediate between *S. littorale* and *S. guthriei*. The leaves are præmorse, and the flowers white with amethyst lines and spots, the acute lobed tip of the lip being amethyst; India; Lieut.-Col. Berkeley.—*Odontoglossum tentaculatum*, Rehb. f. (p. 814), intermediate between *O. ligulare* and *O. rubens*, with narrow petalled yellow flowers spotted with white, the pandurate lanceolate lip whitish, with a cinnamon-coloured dash on the disc, its great peculiarity being the long tentacular bristles of the columnar wings; Baron Schröder.—*Odontoglossum ferrugineum*, Rehb. f. (p. 814), a curious plant, with dark cinnamon sepals and petals tipped with yellow, and a subcordate whitish-yellow lip, with a brown spot on the disc, and three pairs of lamellæ at the base; E. Harvey, Esq.—*Dendrobium dixanthum stenopetalum*, Rehb. f. (p. 814), a narrow-petalled

form obtained from Birmah; H. Gaskell, Esq.—*Primula Stuartii*, Wall. (p. 824, fig. 138), a fine Himalayan Primrose, with oblong-lanceolate denticulate leaves, and umbels of yellow flowers.—*Epidendrum ionocentrum*, Rehb. f. (vol. xx. p. 8), a curious and rare species in the way of *E. Brassavolæ*, but with shorter broader pseudobulbs; the flowers are in long racemes, the sepals and petals lemon-coloured and greenish brown, and the lip white with a violet centre.—*Warszewiczella picta*, Rehb. f. (p. 8), a species resembling *W. discolor*, differing in the rhomboid blunt undulated lip, which is yellowish white with numerous deep purple marginal lines; the petals are white, and the sepals pale greenish or yellowish white.—*Odontoglossum Ruckerianum splendens*, Rehb. f. (p. 8), a very fine variety, with flowers larger than in the type; the sepals and petals are much broader, and the blotches larger and of the warmest mauve; Right Hon. J. Chamberlain.—*Hoya linearis sikkimensis*, Hook. f. (p. 8, figs. 1, 2), an interesting stove plant adapted for baskets, the long weak hairy branches being naturally pendulous in habit; the opposite leaves are fleshy, subterete, hairy; and the waxy-white flowers grow in terminal umbels, and have a star-shaped yellowish corona; M. Dunn, Dalkcith.—*Cypripedium Curtisii*, Rehb. f. (p. 8), a fine species from the island of Sonda, allied to *C. ciliolare* and *C. superbiens*, but distinguished by its very large lip, with sharp acute side angles; the back sepal is elliptic acute, the petals narrowish distantly ciliolate and the front lobe of the lip or slipper large and obtusely conical; F. Sander.

GARDEN GOSSIP.

THE INDIAN AZALEAS were among the most gorgeous of the flowering plants at the Ghent Quinquennial Exhibition.

We quite agree with one of our contemporaries, that the noble group of forty specimen plants, which won the Gold Medal of the highest value for M. de Ghellinck de Walle, were superb, and probably they were never surpassed. The smallest were not less than 3 feet in diameter, while the largest plant, an example of the white *Magnifica*, occupying the centre position, was at least 6 feet through, and such a mass of large, well-developed, and perfectly fresh blossoms that scarcely a leaf could be seen. It is difficult to single out a few, but a special word of praise must be accorded to *Eugène Mazel*, salmon shaded with violet; *Coloris nova*, intense rose; *Belle Gantoise*, peach-pink, with rosy spots; *Coccinea major*, a very fine red; *MacMahon*, salmon; *Hooibrinkii*, semi-double, violet-purple; *Modèle*, bright rose; *Marquis of Lorne*, salmon red; *Comtesse de Flandres*, pale rose, extra fine in size; *Roi d'Hollande*, orange-scarlet; *Roi des Blancs*, a grand white; and *Comtesse Eugénie*, pink margined with white, and with a wine-coloured blotch—all good sorts, as well as grand plants. From some of the other collections might be added *Oswald de Kerchove*, bright rose, and pretty in its crisped margins; *Souvenir de Meyerbeer*, rose, semi-double; *Roi Leopold*, salmon; *Madame Louis Van Houtte*, and *Ferdinand Kegelman*, salmon-pink, extra fine.

— THE AMERICAN WONDER PEA is a very dwarf, very early, and very prolific variety. A correspondent of the *Journal of Horticulture* says: It is the most useful Pea I have ever grown, and this year it has been particularly satisfac-

tory both as regards quantity and quality, and the time of producing. Sown here (Surrey) ten days later than Ringleader, pods were fit to gather a week before that variety, and they are fully a fortnight before Sutton's Little Gem, which I consider a very useful Pea; the aspect in all three cases is the same, only the Wonder has the least manure, but there is at the last double the quantity of the Wonder on the same space of ground as the best of the other two, which is Little Gem. They grow about a foot high, and average from eight to twelve pods on a plant, and six to eight peas in a pod.

— **T**HERE are in cultivation several fine varieties of *ANTHURIUM SCHERZERIANUM*, but according to the *Gardeners' Chronicle*, the best is that known as Cypher's variety, grown and exhibited by Mr. J. Cypher, of Cheltenham. It is massive in growth, and throws up its stout flower stems to a height of from two or three feet, each bearing a perfectly-formed banner-like spathe of the brightest dark scarlet, measuring six inches by four, or often even longer. It thus forms a noble plant, widely distinct from the ordinary good forms which bear their spathes on much shorter stems. Cypher's variety having such grand spathes on tall stems, the whole plant is symmetrical, and arranges well together.

— **D**URING the month of June the varieties of *GLADIOLUS COLVILLEI* are most pleasing and attractive features in the mixed border. That called *THE BRIDE* is especially so; the flowers are of spotless purity in their whiteness, produced with freedom, and affording a long succession. For cutting this flower has few rivals, and scarcely a superior; for if cut as soon as the first (lowermost) flower on the spike opens, the other buds will expand and keep up the succession for weeks. It does best at foot of the front wall of greenhouse, where it will flower and multiply freely; but it is also quite at home in the open but sheltered border if properly prepared, that is made light and rich, and thoroughly drained.

— **I**N reference to *LAYING TURF IN HOT WEATHER*, usually rather a doubtful operation, or at least involving much labour in watering, Mr. Henderson states that he finds he can do so successfully, even in dry and hot summer weather, by covering the turf, when laid down, and before it gets too dry, with about a quarter of an inch of light soil which has been passed through a half-inch sieve. The soil acts as a mulching, and the grass begins to grow through it in a very few days, and soon becomes established.

— **T**HE cultivation of *WATERCRESS IN THE OPEN BORDER* is a very simple matter, as we learn from the *Gardeners' Magazine*. The bed may be made in a shaded or sunny position, more abundant supplies of water being necessary in the latter case. To prepare the bed spread powdery manure over the surface to a depth of three or four inches, and then prick it in with a fork. The watercress does not root very deeply, and therefore the border must not be dug to a greater depth than four or five inches after the manure has been applied, or the latter will be placed beyond the reach of the crop. The surface should be broken down rather fine, and cuttings about three inches in length be inserted between four and

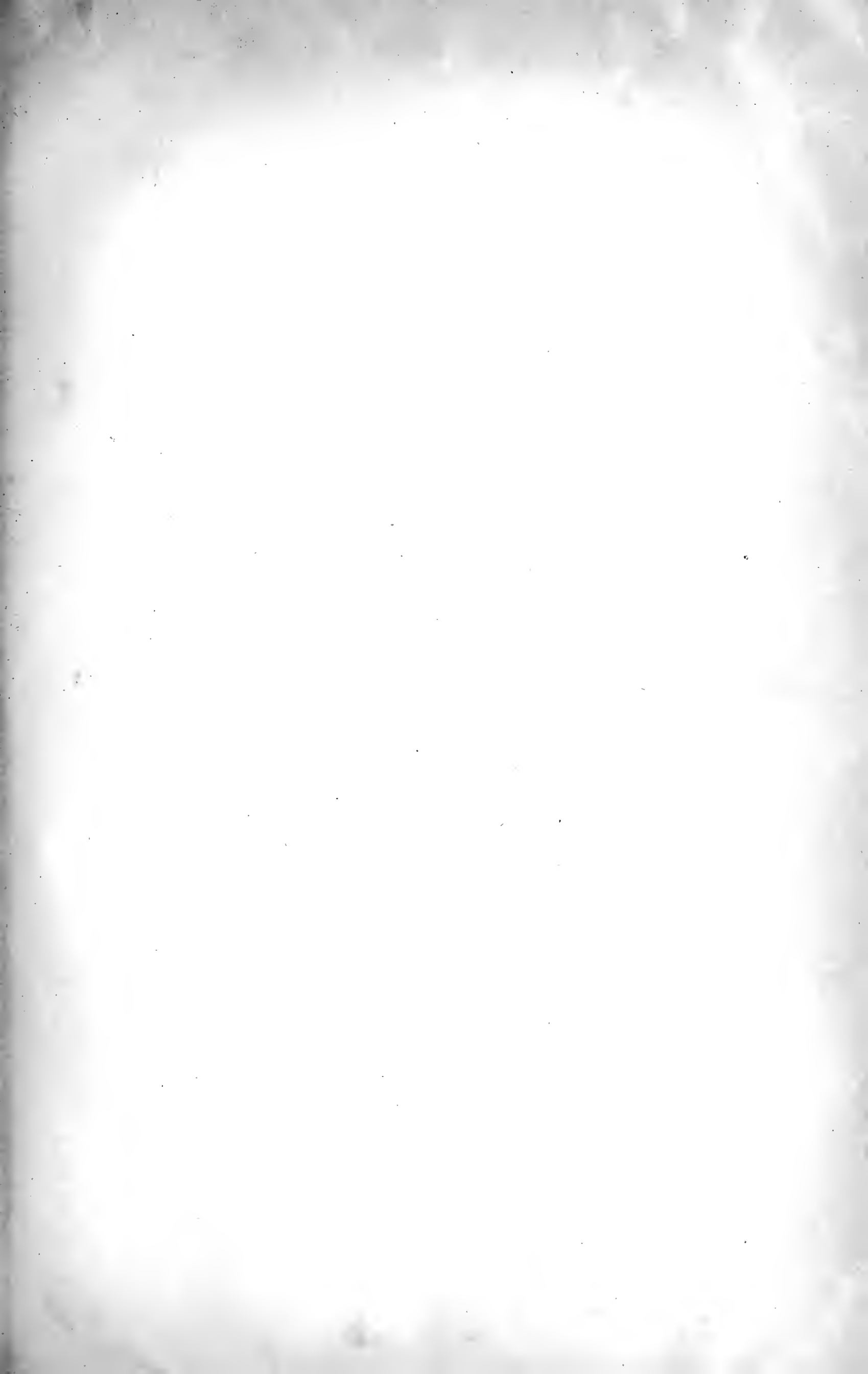
five inches apart each way. They must be well watered in, and the bed be thoroughly watered with a can, to which a coarse rose is affixed, *twice a day*, until the cold weather of the autumn puts a stop to any further growth. In a few weeks after the bed has been formed the plants will commence flowering, and as the flower buds become visible the points of the shoots must be nipped out. Immediately after this stopping they will commence to break freely, and soon furnish an abundance of tender cresses of the most delicate quality, and a continuous succession will be maintained until the autumn, provided the bed is regularly gathered from. Watering the bed immediately after heavy rains is not absolutely necessary, but it will do no harm, and as mere showers are not sufficient to properly moisten the soil it is a good rule to supply it with water twice a day whether the weather is wet or dry, if quick crisp growth is desired.

— **F**ROM Shirenewton last spring came a batch of *PRIMROSES* and *POLYANTHUSES*, the produce of Mr. E. J. Lowe's new garden, and including a considerable number of very beautiful varieties, some blue-purples being novel as well as charming. There were also numerous forms of varied colours marked with a white bar quite across each segment of the flower—*Carnation-striped*, Mr. Lowe calls them—which are very striking and effective. Their origin is thus explained:—The white variety of *Primula vulgaris* was crossed with an accidental striped variety purchased several years ago by A. Clapham, Esq., in Scarborough market; the seedlings have been recrossed for the last three years, and the result is a very varied and showy collection: these are the *Carnation-striped* varieties. A white *Primula vulgaris* was crossed with a blue alpine *Auricula*; the seedlings are a few blue, blue and white and purple: these are of a very pleasing character.

— **F**EW subjects are more effective as *RAFTER PLANTS* than the old favourite *EPHYLLUM TRUNCATUM*. At Tatton, in one of the numerous span-roofed houses, there are a couple of examples on the usual *Pereskia* stock, which were planted out on each side of the house opposite each other, and trained up the rafters so as to meet at the ridge. They have been grafted with *E. truncatum*, which now has grown into a dense close mass near upon a yard through. When covered with their bright flowers these plants must have a gorgeous effect. There is, or was not long ago, some beautiful specimens of this kind on the roof of one of the pine stoves at Knowsley.

— **A**MONGST the *Water Lilies* flowering at Kew, the *NYMPHÆA STELLATA ZANZIBARENSIS* is by far the finest of the tropical kinds, with purple or blue flowers. This is a recently introduced plant with the flowers much larger than those of our native *Water Lily*, and having broader petals of a splendid purple colour.

— **A**MONGST the *HARDY ORCHIDS* at Glasnevin there were recently in flower several examples of three fine forms of our native *ORCHIS LATIFOLIA*, namely, the grand *Kilmarnock* variety, and two other no less beautiful, one discovered by the late Dr. Moore near Kilgobbin, in the metropolitan county, and the other found by the Hon. Mrs. Barton in the West of Ireland.





ROSE QUEEN OF QUEENS.

[PLATE 593.]

OF the many new Roses, English and foreign, that are continually putting in a claim for public recognition—pedigree Roses, casual seedlings, and branch sports—we have here apparently a new line of departure, the QUEEN OF QUEENS being a cross between a hybrid perpetual and the old Alba or Belgic Rose known as the Maiden's Blush. The flowers are large, full, perfect in outline, and very sweet, pink with blush edges in summer, and altogether pink in autumn. It seems to require a clear sun to bring out the blush edging to perfection, and it is then very lovely; but when this

feature is absent it is one of the finest of pink Roses. The constitution of the plant is hardy, the habit vigorous, and the foliage handsome and abundant. It is a first-class show Rose in the summer and a most abundant bloomer in the autumn. Last year the whole of the plants were covered with beautiful flowers throughout the months of September and October, so that they who covet a bed of bright pink Roses at that season may safely look for it here.

The Queen of Queens is now first introduced by Messrs. Wm. Paul & Son, of Waltham Cross, Herts.—T. MOORE.

THE NATIONAL CARNATION AND PICOTEE SOCIETY.

ON the 24th of July, at South Kensington, the annual gathering of the Southern Section of the above Society took place.

The display was entirely made up of southern flowers, the date being too early for the production of those of the north; and though scarcely so comprehensive a show as that of last year, it was well filled, and extremely interesting, the quality of the flowers being generally unexceptional. Mr. E. S. Dodwell took the lead with Carnations; whilst with Picotees Mr. Turner occupied the first place, closely pressed by Mr. Douglas, whose finely grown flowers were very difficult to beat. The materials brought together were indeed so generally good that the admirers of these flowers had a great treat provided for their delectation. A very large and interesting collection of blooms of Carnations, Picotees, and Cloves, comprising eight boxes of flowers, forty in each box, was shown by Messrs. James Veitch & Sons, Exotic Nursery, Chelsea. Messrs. H. Cannell & Sons also sent five boxes of Carnations and Picotees, and Mr. H. G. Smyth had a box of blooms of his fine self, *Mary Morris*, which is of a striking hue of soft carmine.

A week later on—July 31st, a supplementary show, suggested by Mr. Dodwell, was held by the same section of the Society at the Royal Nursery, Slough, as a compliment to Mr. Charles Turner, whose name is so thoroughly identified with floriculture in all

its branches. This was a grand show, and a most genial gathering, which will long endure in the recollection of those whom circumstances permitted to be present.

The Northern Section of the Society held its show under the auspices of the Royal Botanical and Horticultural Society of Manchester, in the Town Hall of that city, on August 14th, and had the good fortune to bring together a remarkably fine exhibition.

The details of the several shows are given below.

SHOW AT SOUTH KENSINGTON.

CARNATIONS.

Class A. 24 blooms, not less than 12 dissimilar.—1st, Mr. E. S. Dodwell, Stanley Road, Oxford, with James Douglas P.F., Sybil R.F., Sarah Payne P.F., Master Fred C.B., James Douglas P.F., Fred S.B., Henry Cannell S.F., Sybil R.F., Mrs. Carter C.B., Master Fred C.B., Samuel Brown S.F., Delicata R.F., James M'Intosh S.B., John Keet R.F., Sarah Payne P.P.B., Edward Adams S.B., Robert Lord S.B., Henry Cannell S.F., James Merryweather R.F., Sarah Payne P.P.B., Sarah Payne P.F., James M'Intosh S.B., Tim Bobbin R.F., Rifleman, C.B. Equal 2nd prizes to Mr. James Douglas, gardener to F. Whitbourn, Esq., Great Gearies, Ilford; and to Mr. C. Turner, Royal Nursery, Slough. Mr. Douglas showed Admiral Curzon S.B., James Douglas P.F., Sarah Payne P.P.B., Sybil R.F., Fred S.B., Sarah Payne P.F., Sportsman S.F., Sarah Payne P.P.B., Robin Hood R.F., Horace K. Mayor P.P.B., Sportsman S.F., Fred S.B., Mayor of Nottingham P.F., William Skirving P.P.B., Edward Adams S.B., John Keet R.F., Squire Llewelyn P.P.B., Arthur Medhurst S.B., Florence Nightingale P.F., John Keet R.F., Admiral Curzon S.B., James Merryweather R.F., Florence Nightingale P.F., Henry Cannell S.F. Mr. Turner's flowers were—Sarah Payne P.F., Squire Llewelyn P.P.B., Rob Roy R.F., Sarah Payne P.P.B., George S.B., Jessica R.F., William Skirving P.P.B., Rob Roy R.F., Squire Penson P.P.B., John Keet R.F., E. S. Dodwell C.B., Clipper S.F., Mrs.

Bridgewater R.F., Florence Nightingale P.F., Jupiter S.F., Robert Lord S.B., Robert Lord S.B., Rifleman C.B., John Ball S.F., Sir Garnet Wolseley P.P.B., Arthur Medhurst S.B., E. S. Dodwell C.B., Sarah Payne P.P.B., Jessica R.F. 3rd, Mr. H. Hooper, Bath. 4th, Mr. J. Hines, Ipswich.

Class B. 12 blooms, dissimilar.—1st, Mr. E. S. Dodwell, with Sarah Payne P.F., Master Fred C.B., James M'Intosh S.B., Sarah Payne P.P.B., E. S. Dodwell C.B., Robert Lord S.B., Sybil R.F., Florence Nightingale P.F., James Douglas P.F., Samuel Brown S.F., Admiral Curzon S.B., Mrs. Mathews R.F. 2nd, Mr. J. Douglas, with Sybil R.F., Sarah Payne P.P.B., Sarah Payne P.F., Squire Llewelyn P.P.B., Clipper S.F., John Keet R.F., William Skirving P.P.B., Sportsman S.F., Mrs. Barlow P.P.B., Admiral Curzon S.B., Florence Nightingale P.F., Edward Adams S.B. 3rd, Mr. Joseph Lakin, Temple Cowley, Oxford, with George S.B., H. K. Mayor P.P.B., Seedling, James Douglas P.F., Premier P.F., Deadnough S.B., Cristagalli R.F., Friar Tuck S.F., Harrison Weir C.B., John Bayley S.F., James Taylor P.P.B., John Keet R.F. 4th, Mr. A. Gibson, gardener to T. F. Burnaby Atkins, Esq., Sevenoaks, with Dr. Foster P.F., Sybil R.F., Mayor of Nottingham P.F., Squire Dodwell C.B., Mrs. Home R.F., Sarah Payne P.P.B., Admiral Curzon S.B., Mrs. Anderson R.F., Edward Adams S.B., Tom Power S.B., James Taylor P.P.B. 5th, Mr. John Hines, Ipswich. 6th, Mr. J. Buxton, Clapham. Mr. H. Catley, of Bath, also exhibited.

Class C. 6 blooms, dissimilar.—1st, Master Stanley H. Dodwell, Oxford, with Stanley Hudson C.B., Ben Simonite S.B., Robert Lord S.B., Sarah Payne P.F., Mr. Carter S.F., Mrs. Carter C.B. 2nd, Mr. Rowan, Manor Street, Clapham, with Edward Adams S.B., Squire Dodwell C.B., Squire Llewelyn P.P.B., Annihilator S.F., George S.B., Mayor of Nottingham P.F. 3rd, Mr. W. Meddick, Bath, with Lord Napier S.B., Advancer, Florence Nightingale P.F., John Ball S.F., Marquis of Lansdowne, Dr. Masters C.B.

Class D. Single blooms.—*Scarlet Bizarres*: Mr. Turner 1st with Philip Thomas; Mr. Douglas 2nd, 3rd, and 4th with Admiral Curzon; Mr. E. S. Dodwell 5th with James M'Intosh. — *Crimson Bizarres*: Mr. Turner 1st and 2nd with E. S. Dodwell, and 4th with Rifleman; Mr. Dodwell 3rd with J. D. Hextall. — *Pink and Purple Bizarres*: Mr. Turner 1st with Squire Penson; Mr. J. Douglas 2nd, 4th, and 5th with Sarah Payne; Mr. Dodwell 3rd with Sir Garnet Wolseley. — *Purple Flakes*: Mr. Douglas 1st with James Douglas, 3rd with Seedling No. 3, and 4th with Florence Nightingale; 2nd, Mr. Dodwell with James Douglas. — *Scarlet Flakes*: Mr. Turner 1st with Clipper; Mr. Douglas 2nd, 3rd, and 5th with Sportsman; 4th, Mr. Dodwell with Seedling. — *Rose Flakes*: 1st, Mr. Dodwell with Sybil; Mr. Turner 2nd and 5th with Rob Roy; Mr. Douglas 3rd with John Keet, and 4th with Sybil.

The Premier Carnation was a fine and beautifully marked bloom of Dodwell's *Squire Penson* P.P.B., shown by Mr. Turner.

PICOTEES.

Class E. 24 blooms, not less than 12 dissimilar.—1st, Mr. C. Turner, Slough, with Her Majesty L.P., Dr. Abercrombie H.R., Empress Eugénie L.R., Princess Dagmar H.P., Louisa H.R., Dr. Abercrombie H.R., Daisy L.R., Clara Penson L.P., Louisa H.R., Lucy L.R., Constance Heron H.S.C., Clara Penson L.R., Monarch H.R., Cynthia L.P., Mrs. Norman H.R., Constance Heron H.S.C., Dr. Epps H.R., Mrs. Rudd H.S.C., Mrs. Bower L.R., Picturata H.R., Lucy L.R., Henry H.R., Mr. Tutton L.P., Mrs. Bower L.R. 2nd, Mr. J. Douglas, gardener to F. Whitbourn, Esq., Great Gearies, Ilford, with Mrs. Bower L.R., J. B. Bryant H.R., Her Majesty L.P., Miss Lee H.S.C., Clara Penson L.R., Jessie M.P., J. B. Bryant H.R.,

Her Majesty L.P., Ann Lord L.P., Mrs. Payne H.R., Edith D'Ombraire H.R., John Smith H.R., Zerlina H.P., Princess of Wales H.R., Ethel L.R., Constance Heron H.S.C., Mrs. A. Chancellor H.P., Thomas William L.R., Jessie M.P., Mrs. Gorton L.R., Nymph L.P., Royal Visit H.R., Olive Mary H.P., Violet Douglas L.R. 3rd, Mr. E. S. Dodwell, with Her Majesty L.P., Royal Visit H.R., Clara Penson L.R., Brunette H.R., Her Majesty L.P., Purity H.R., Brunette H.R., Edith D'Ombraire H.R., Mary L.P., Daisy L.R., Empress Eugénie L.R., Mrs. Payne H.R., Tinnie H.P., Novelty H.P., Mrs. Payne H.R., John Smith H.R., Daisy L.R., Tinnie H.P., Edith D'Ombraire H.R., Muriel H.P., Miss Horner L.R., Miss Horner L.R., Mrs. A. Chancellor H.P. 4th, Mr. H. Hooper, Bath. 5th, Mr. J. Hines, Ipswich.

Class F. 12 blooms, dissimilar.—1st, Mr. J. Douglas, with Mrs. Bower L.R., J. B. Bryant H.R., Her Majesty L.P., Princess of Wales H.R., Mrs. Payne H.R., Mrs. Gorton L.R., Constance Heron H.S.C., Zerlina H.P.; Mrs. A. Chancellor H.P., Ethel L.R., Nymph L.P., Mrs. Allcroft L.R. 2nd, Mr. E. S. Dodwell, with John Smith H.R., Mrs. Gorton L.R., Tinnie H.P., Countess of Wilton H.R., Mrs. Rudd H.S.C., Muriel H.P., Edith D'Ombraire H.R., Ethel L.R., Novelty H.P., Mrs. Payne H.R., Jessie M.P., Winifred Esther M.R. 3rd, Mr. J. Hines, Ipswich, with Brunette H.R., Mrs. Allcroft L.R., Emily M.R., Mrs. Bower L.R., Royal Visit H.R., J. B. Bryant H.R., Miss Williams L.R., Rev. J. B. Camm H.P., Alliance H.P., Mary L.P., Lady Louisa H.R., Tinnie H.P. 4th, Mr. Buxton, Clapham, with Tinnie H.P., Mrs. Allcroft L.R., Royal Visit H.R., Emily M.R.; Lady Louisa H.R., Mrs. Dodwell H.R., Mrs. Keynes L.R., Countess of Wilton H.R.; Dr. Epps H.R., Miss Gorton L.R., Alice M.P., Delicata L.P.

Class G. 6 blooms, dissimilar.—1st, Master Stanley Dodwell, with Her Majesty L.P., Mrs. Niven H.P., John Smith H.R., Edith D'Ombraire H.R., Miss Wood L.R., Alice M.P. 2nd, Mr. J. Lakin, with Countess of Wilton H.R., Alliance H.P., Minnie L.P., Mrs. Rudd H.S.C., Clara L.R.; L'Elegant L.R. 3rd, Mr. A. Gibson, Sevenoaks, with Unknown, Violet Douglas L.R.; Mary L.P., Miss Small H.R., Evelyn L.R., Beauty of Cheltenham M.P. 4th, Mr. Rowan, Clapham, with Delicata L.R., Royal Visit H.R., Tinnie H.P., Mrs. Allcroft L.R., Mrs. Keynes L.R., Emily M.R.

Class H. Single blooms.—*Heavy Reds*: 1st and 2nd, Mr. Turner, with Picturata; 3rd with Dr. Abercrombie; 4th, Mr. Douglas, with Princess of Wales, 5th with John Smith. — *Light Reds*: 1st, Mr. Dodwell, with Mrs. Gorton; 2nd, Mr. Turner, with Clara; 3rd and 4th with Mrs. Bower; 5th, Mr. Douglas, with Mrs. Gorton. — *Heavy Purples*: 1st, 2nd, and 4th, Mr. Douglas, with Mrs. A. Chancellor, 5th with Olive Mary; 3rd, Mr. Turner, with Zerlina. — *Light Purples*: 1st, Mr. Turner, with Ann Lord, 3rd with Evelyn; 2nd and 4th, Mr. Douglas, with Baroness Burdett-Coutts, 5th with Nymph. — *Heavy Roses*: 1st and 2nd, Mr. Turner, with Mrs. Payne, 4th with Louisa; 3rd, Mr. Douglas, with Mrs. Payne; 5th, Mr. Dodwell, with Edith D'Ombraire. — *Light Roses*: 1st, 2nd, and 4th, Mr. Turner, with Lucy; 3rd, Mr. Douglas, with Mrs. Allcroft; 5th, Mr. Dodwell, with L'Elegant. — *Yellow-ground*: 1st, 2nd, and 5th, Mr. Douglas, with Prince of Orange; 3rd and 4th, Mr. Turner, with Janira.

The Premier Picotee was a pure bloom of Simonite's *Mrs. Gorton* L.R., shown by Mr. Douglas.

SELS, FANCIES, &C.

Class I. 24 blooms, not less than 12 dissimilar.—1st, Mr. C. Turner, with Rufus, Lady Cathcart, Janira, Rob Roy, W. P. Milner, Egyptian; Enchantress, Rufus, Arthur Medhurst, Rosa Bonheur, Thomas Moore, Lady Cathcart; Duchess of Connaught,

Seedling, Edith, Whipper-in, Jessica, Janira; Matador, Robert Lord, L'Elegant, Duchess of Connaught, Conqueror, L'Elegant. 2nd, Mr. Lakin, with Mrs. Pratt, Henry Cannell, Leader, William IV., E. S. Dodwell, The Bride; Seedling, Huson Morris, Crimson King, Titania, Rosa Bonheur, Lord Wolseley; Rosy Gem, Mrs. Pratt, Sarah Payne, King of Scarlets, Seedling, Mrs. Champneys; Hottentot, Brilliant, Ernest Wilkins, Seedling, Seedling, Oberon. 3rd, Mr. J. Douglas. 4th, Mr. H. Hooper. 5th, Mr. H. Catley.

Class K. 12 blooms, dissimilar.—1st, E. S. Dodwell, Esq., with Mrs. Dodwell, Harlequin, Mrs. Southgate, The Bride; Florence Nightingale, Mulatto, Sarah Payne, Hector; Huson Morris, Titania, Henry Cannell, Mrs. Carter. 2nd, Master Stanley Dodwell, with Mrs. Dodwell, The Bride, Mrs. Southgate, Titania; Mrs. Carter, John Soper, Sarah Payne, Dr. Hogg; Huson Morris, Saturn, Euphrosyne, Henry Cannell.

Class L. 12 blooms, yellow-ground Picotees.—1st, Mr. C. Turner, with Janira, Bullion, Grandis, Janira; Coronation, Lady Mary Lascelles, Pluto, Bullion; Lady Biddulph, Coronation, Flavius, Lady Biddulph. 2nd, Mr. Hooper. 3rd, Mr. Catley.

Class M. plants in pots, 9 dissimilar.—1st, Mr. C. Turner. 2nd, Mr. J. Douglas. It would be an improvement if this class were thrown open to border flowers, as well as to show Carnations and Picotees, Selfs and Fancies. Its principal object is to secure a good head of blooms and to show these fragrant and favourite flowers in the best condition as decorative plants for the conservatory. The class should, therefore, be occupied not so much by florist cultivators as cultivators of decorative plants, and especially by amateurs.

SHOW AT SLOUGH.

This was a fine exhibition. Messrs. Veitch & Sons, Chelsea, staged 120 varieties of Carnations and Picotees, which were very effective.

CARNATIONS.

Class A. 24 blooms, not less than 12 dissimilar.—1st, Mr. C. Turner, Slough, with Jessica R.F., John Ball S.F., Mrs. Bridgewater R.F., Figaro S.F., Rob Roy R.F., John Ball S.F., E. S. Dodwell C.B., Jessica R.F.; Matador S.F., E. S. Dodwell C.B., Robert Lord S.B., William Skirving P.P.B., Juno P.F., Mrs. Bridgewater R.F., George S.B., Sarah Payne P.P.B.; William Skirving P.P.B., Robert Lord S.B., Rob Roy, R.F., Thomas Moore C.B., Mrs. Mathews R.F., Matador S.F., Sporting Lass P.F., Master Stanley S.B. 2nd, Mr. E. S. Dodwell, Oxford, with Samuel Barlow C.B., Dorothy R.F., Robert Lord S.B., Florence Nightingale P.F., Samuel Barlow, C.B., Alfred Hudson S.B., Squire Llewellyn P.P.B., Florence Nightingale P.F., Mrs. Anstiss P.P.B., Henry Cannell S.F., Master Fred S.B., Henry Cannell S.F., Mrs. Mathews R.F., Master Fred C.B., Master Stanley S.B., E. S. Dodwell C.B.; Robert Lord S.B., William Skirving P.P.B., Samuel Brown S.F., Sarah Payne P.P.B., James Douglas P.F., Tim Bobbin R.F., Samuel Brown S.F., Sarah Payne P.P.B. 3rd, Mr. James Douglas, Ilford, with Fred S.B., Mrs. Lombard R.F., Earl Stamford P.F., Sarah Payne, P.P.B., Robin Hood R.F., Fred S.B., Rifleman C.B., Robin Hood R.F.; Squire Meynell P.F., John Keet R.F., Squire Penson P.P.B., Florence Nightingale P.F., T. S. Ware P.P.B., Squire Penson P.P.B., Admiral Curzon S.B., Sarah Payne P.P.B.; Admiral Curzon S.B., Crimson Banner, C.B., Sportsman S.F., Robert Lord S.B., Squire Whitbourn P.F., Sportsman S.F., James Douglas P.F., Henry Cannell S.F.

Class B. 12 blooms, dissimilar.—1st, Mr. E. S. Dodwell, with Dorothy R.F., Samuel Barlow C.B.,

Florence Nightingale P.F., Henry Cannell S.F.; Sarah Payne P.F., John Keet R.F., Master Fred C.B., Arthur Medhurst S.B.; E. S. Dodwell C.B., Robert Lord S.B., Squire Whitbourn P.F., Sarah Payne P.P.B. 2nd, Mr. J. Douglas, with Fred S.B., John Keet R.F., Florence Nightingale P.F., Squire Penson P.P.B.; Miss Henderson P.P.B., Earl Stamford P.F., Sarah Payne P.P.B., Rob Roy R.F.; Sportsman S.F., Horace K. Mayor C.B., Admiral Curzon S.B., Clipper S.F. 3rd, Mr. Joseph Lakin, Temple Cowley, Oxford, with Dr. Cronin C.B., James Douglas P.F., Rifleman C.B., John Ball S.F.; Robert Lord S.B., Squire Llewellyn P.P.B., Fred S.B., Miss Henderson P.P.B.; Sarah Payne P.P.B., Mrs. Tomes R.F., J. D. Hextall C.B., Delicata R.F. 4th, Mr. W. Slack, Cheshire field. 5th, T. F. Burnaby Atkins, Esq., Sevenoaks. 6th, Mr. J. Buxton, Clapham.

Class C. 6 blooms, dissimilar.—1st, Mr. T. Anstiss, Brill, near Thame, with Thomas Moore C.B., Sarah Payne P.P.B., Bayley Junior, S.F., Alfred Hudson S.B., Master Stanley S.B., Mayor of Oxford P.F. 2nd, Master Stanley Dodwell, Oxford, with James Douglas P.F., Squire Llewellyn P.P.B., Unexpected P.P.B., Edward Adams S.B., Scarlet Keet S.F., Master Fred C.B. 3rd, Mr. M. Rowan, Clapham. 4th, Mr. W. Meddick, Bath. 5th, Mr. J. P. Sharp, Perry Barr, Birmingham. 6th, Mr. G. Wynn.

Class D. Single blooms—Scarlet Bizarres: 1st, Mr. Douglas with Fred, 2nd with Master Stanley; 3rd and 4th, Mr. Turner with George; 5th, Mr. Dodwell with Master Stanley.—*Crimson Bizarres:* 1st and 2nd, Mr. Dodwell with J. D. Hextall, 3rd with Horace K. Mayor; 4th and 5th, Mr. Turner with Rifleman.—*Pink and Purple Bizarres:* 1st, Mr. Dodwell with Mrs. Anstiss, 3rd with Sarah Payne; 2nd and 4th, Mr. Turner with William Skirving, 5th with James Taylor.—*Purple Flakes:* 1st and 4th, Mr. Turner with Sarah Payne; 2nd and 5th, Mr. Dodwell with Sarah Payne, 3rd with Squire Whitbourn.—*Scarlet Flakes:* 1st and 2nd, Mr. Dodwell with Henry Cannell; 3rd, Mr. Turner with Matador, 4th and 5th, with Flirt.—*Rose Flakes:* 1st and 2nd, Mr. Turner with Jessica, 4th with Rob Roy; 3rd, Mr. Dodwell with Robin Hood, 5th with John Keet.

The Premier Carnation selected from the whole exhibition was Dodwell's *Robert Lord* S.B., a splendid bloom exhibited in Mr. Turner's stand of 24 blooms.

PICOTEEES.

Class E. 24 blooms, not less than 12 dissimilar.—1st, Mr. C. Turner, with Mrs. Webb H.Sc., Her Majesty L.P., Mrs. A. Chancellor H.P., Mrs. Bower L.R., Dr. Abercrombie H.R., Her Majesty L.P., Mrs. Webb H.Sc., Mrs. A. Chancellor H.P.; Mr. Tutton L.P., J. B. Bryant H.R., Mrs. Payne H.R.O., Monarch H.R., Mrs. Payne H.R.O., J. B. Bryant H.R., Mr. Tutton L.P., Thomas William L.R.; Dr. Epps H.R., Baroness Burdett-Coutts M.P., Muriel H.P., Morning Star M.Sc., Dr. Abercrombie H.R., Zerlina H.P., Edith D'Ombraïn H.R.O., Exhibition H.R. 2nd, Mr. Dodwell, with Mrs. A. Medhurst H.P., Miss Flowdy L.R.O., Royal Visit H.R.O., Brunette H.R., Mrs. A. Medhurst H.P., Lady Holmesdale H.R.O., Miss Gorton L.R.O., Royal Visit H.R.O.; Clara Penson L.P., Alice M.P., Muriel H.P., Mrs. Payne H.R.O., Mrs. Payne H.R.O., Tinnie H.P., Mrs. Rudd H.Sc., Minnie L.P.; Dr. Epps H.R., Edith D'Ombraïn H.R.O., Winifred Esther M.R., Zerlina H.P., Mrs. A. Chancellor H.P., Dr. Epps H.R., Ann Lord L.P., Zerlina H.P. 3rd, Mr. Douglas, with Jessie M.P., Mrs. Payne H.R.O., Mrs. Bower L.R., Princess of Wales H.R., J. B. Bryant H.R., Her Majesty L.P., Mrs. A. Chancellor H.P., Princess of Wales H.R.; Zerlina H.P., Mrs. Gorton L.R., Mrs. A. Chancellor H.P., Her Majesty L.P., Ethel L.R.O., Brunette H.R., Mrs. Payne H.R.O., Mrs. Gorton L.R.; Ann Lord L.P., Brunette H.R., Baroness Burdett-

Coutts M.P., Esther Minnie H.R.O., Thomas William L.R., Estelle L.R.O., Jessie M.P., Royal Visit H.R.O.

Class F. 12 blooms, dissimilar.—1st, Mr. E. S. Dodwell, with Mrs. A. Chancellor H.P., Royal Visit H.R.O., Zerlina H.P., Countess of Wilton H.R.; Mrs. Payne H.R.O., Muriel H.P., Mrs. Rudd H.S.C., Daisy L.R.O., Mrs. A. Medhurst H.P., Ada Hannah H.S.C., Edith D'Ombraïn H.R.O., Novelty H.P. 2nd, Mr. Douglas, with J. B. Bryant H.R., Her Majesty L.P., Alliance H.P., Mrs. Payne H.R.O.; Mrs. Bower L.R., Constance Heron H.S.C., Mrs. Gorton L.R., Brunette H.R., Ann Lord L.P., Violet Douglas L.R., Lady Louisa H.S.C., Clara Penson L.P. 3rd, T. F. Burnaby Atkins, Esq. 4th, Mr. J. Buxton.

Class G. 6 blooms, dissimilar.—1st, Master Stanley Dodwell, with Zerlina H.P., Mrs. A. Chancellor H.P., Mrs. Payne H.R.O., Morna H.R., Dr. Epps H.R., Royal Visit H.R.O. 2nd, Mr. Joseph Lakin, with Clara L.R., Brunette H.R., Tinnie H.P., Mrs. Wilson H.R., Edith D'Ombraïn H.R.O., Medina H.P. 3rd, Mr. T. Abstiss. 4th, Mr. W. Slack, Chesterfield. 5th, Mr. M. Rowan. 6th, Mr. J. P. Sharp.

Class H. Single blooms.—*Heavy Reds*: 1st, Mr. Dodwell with John Smith, 3rd with Mrs. Dodwell, 5th with Brunette; 2nd, Mr. Turner with Dr. Abererombie; 4th, Mr. Douglas with J. B. Bryant. —*Light Reds*: 1st and 2nd, Mr. Turner with Thomas William; 3rd, Mr. Dodwell with Mrs. Gorton, 4th and 5th with Thomas William. —*Heavy Purples*: 1st, 2nd, 3rd, Mr. Turner with Mrs. A. Chancellor; 4th and 5th, Mr. Douglas with the same. —*Light Purples*: 1st, Mr. Turner with Mr. Tutton, 3rd with Her Majesty, 4th with Cynthia, 5th with Baroness Burdett-Coutts; 2nd, Mr. Douglas with Baroness Burdett-Coutts. —*Heavy Roses*: 1st and 4th, Mr. Turner with Mrs. Payne, 2nd with Edith D'Ombraïn, 3rd with Fanny Helen, 5th with Constance Heron. —*Light Roses*: 1st, Mr. Turner with Lucy; 2nd, 3rd, 4th, Mr. Dodwell with L'Elegant, 5th with Miss Lee. —*Yellow-ground*: 1st and 3rd, Mr. Douglas with Princess Beatrice; 2nd, Mr. Turner with Bullion, 5th with Princess Marguerite; 4th, Mr. Dodwell with Bullion.

The Premier Picotee, selected from the whole of the stands exhibited, was a grand bloom of Fellowes' Mrs. Payne H.R.O., exhibited by Mr. E. S. Dodwell.

SELFS, FANCIES, &c.

Class I. 24 blooms, not less than 12 dissimilar.—1st, Mr. Turner, with Mary Morris, Mrs. Bridgewater, Virgo, Mrs. Llewellyn, Rufus, Autolycus, Flirt, Jessie, Lady Cathcart, Thomas Moore, Conqueror, Albert, Whipper-In, Bridesmaid, Field Marshal, Robert Lord, &c. 2nd, Mr. Joseph Lakin, with Mrs. Dodwell, Rosa Bonheur, Oberon, Titania, Tom Power, Princess Marguerite, Sarah Payne, Ernest Wilkins, Clipper, Scarlet Gem, Euphrosyne, Mrs. Matthews, Flavius, and several seedlings. 3rd, Mr. Douglas.

Class K. 12 blooms, dissimilar.—1st, Mr. E. S. Dodwell with Saturn, Mrs. Carter, Titania, E. S. Dodwell; Seedling, Florence, Cardinal, Seedling; Mrs. Dodwell, Thomas Moore, The Bride, Florence Nightingale. 2nd, Master Stanley H. Dodwell with Titania, Arthur Medhurst, The Bride, Dandy Dimont; Henry Cannell, Seedling, Clipper, Miss Erskine Wemyss; Sarah Payne, King of Yellows, Florence Nightingale, Hector.

Class L. 12 blooms, Yellow-ground Picotees.—1st, Mr. Turner with Coronation, Janira, Lightning, Wm. Greenaway, Bullion, Miss Hobbs, Hon. M. Lascelles, Mazzini, &c. 2nd, Mr. J. Douglas with Mrs. Colman, Ne plus Ultra, Flavius, Princess Beatrice, Lightning, Prince of Orange, Alice, &c.

A Special Prize, consisting of a case of silver spoons, given by the inhabitants of Slough, for 6 Carnations and 6 Picotees, was awarded to Mr. Joseph Lakin.

NOVELTIES.

At the Exhibitions of the National Carnation and Picotee Society a fund is privately subscribed, to be awarded in Prizes as an encouragement for the raising and exhibiting of Seedlings; and Certificates of Merit are awarded to flowers which are considered deserving of this distinction. At South Kensington the following prizes and certificates were distributed. For descriptions of the flowers, see *Register of Novelties*, p. 139:—

Thomas Moore, Jun. (Dodwell), C.B.—1st Prize; shown by Mr. J. Douglas.

Rob Roy (Gorton), R.F.—1st Prize, and 1st-class Certificate; Mr. C. Turner.

Robin Hood (Gorton), R.F.—2nd Prize; Mr. J. Douglas.

Squire Whitbourn (Dodwell), P.F.—1st Prize; Mr. J. Douglas.

Henry Cannell (Dodwell), S.F.—1st Prize and 1st-class Certificate; Mr. E. S. Dodwell, and J. Douglas.

Royal Purple (Veitch), Clove.—1st-class Certificate; Messrs. Veitch & Sons.

Sir Beauchamp Seymour (Veitch), Border.—1st-class Certificate; Messrs. Veitch & Sons.

At Slough there were several Novelties exhibited (see *Register of Novelties*), and the following awards were made:—

Samuel Barlow (Dodwell) C.B.—1st Prize and 1st-class Certificate; shown by Mr. E. S. Dodwell.

Mrs. Anstiss (Dodwell), P.P.B.—1st Prize and 1st-class Certificate; Mr. E. S. Dodwell.

Squire Whitbourn (Dodwell), P.F.—1st-class Certificate; Mr. E. S. Dodwell.

Dorothy (Dodwell) R.F.—1st Prize and 1st-class Certificate; Mr. E. S. Dodwell.

Mrs. Bridgewater (Turner), R.F.—2nd Prize; Mr. C. Turner.

Mrs. Webb (Turner) H.S.C. Picotee.—1st Prize and 1st-class Certificate; Mr. C. Turner.

SHOW AT MANCHESTER.

CARNATIONS.

Class A. 12 blooms, dissimilar.—1st, Mr. B. Simonite, Rough Bank, Sheffield, with James Douglas P.F., Seedling R.F., very fine, Arthur Medhurst S.B., fine, J. D. Hextall C.B., Robert Lord S.B., Sarah Payne P.P.B., Sportsman S.F., William Skirving C.B., fine, Seedling P.F., Admiral Curzon S.B., Seedling R.F., Seedling P.P.B., fine. 2nd, Mr. Robert Lord, Todmorden, with James Douglas P.F., Raynor Johnson S.B., Sybil R.F., Master Fred C.B., J. D. Hextall C.B., Sportsman S.F., Dr. Foster P.F. Mars S.B., Rembrandt S.B., Falconbridge P.P.B., Admiral Curzon S.B., Scarlet Keet S.F. 3rd, Mr. G. Geggie, Bury. 4th, Mr. G. Rudd, Bradford. 5th, Mr. Jonathan Booth, Failsworth, Manchester. In Mr. Simonite's stand were some fine blooms, well grown, and of good quality.

Class C. 12 blooms, 9 dissimilar.—1st, Mr. R. Gorton, Gildabrook, Eccles, with Edward Adams S.B., Sarah Payne P.P.B., Rob Roy R.F., William Skirving C.B., William Skirving C.B., Dr. Foster P.F., John Ball S.F., Admiral Curzon S.B., E. S. Dodwell C.B., John Keet R.F., Harrison Weir C.B., Dr. Foster P.F. 2nd, Mr. W. Taylor, Middleton. 3rd, Mr. E. Shaw, Bury. 4th, Mr. W. Prescott, Manchester. 5th, Mr. F. Law, Todmorden. There were three other exhibitors, Mr. Slack being one of them, in whose stand was a grand specimen of Master Fred C.B., which was awarded the Premium. Notwithstanding the rough weather and heavy rain of the preceding week, Mr. Gorton's flowers were very fine, though wanting the brightness and glory the summer weather would have given them. The blooms of William Skirving C.B., Rob Roy R.F., Harrison Weir C.B., Edward Adams S.B., John Keet R.F., and

Sarah Payne P.P.B., were full of quality, and being set up with the fine eye for effect for which Mr. Gorton is distinguished, they looked better than most of the other stands, some of which contained variously-sized flowers.

Class E. 6 blooms, dissimilar.—1st, Mr. W. Blackley, Whitefield, near Manchester. 2nd, Mr. Thos. Maddock, Wakefield. 3rd, Mr. Wm. Whittam, Hebden Bridge. 4th, Mr. Josh. Kitching, Saltaire. 5th, Mr. George Gill, Wakefield. In the 1st prize stand Master Fred C.B. was well shown, very rich in colour and marking. In the 2nd stand a remarkably fine specimen of J. D. Hextall C.B. was noticeable, so good indeed that some opinions inclined to ascribe to it the premiership of the show.

Class G. Single blooms.—*Scarlet Bizarres*: 1st, Mr. Joseph Blackley, and 3rd with Admiral Curzon; 2nd, Mr. B. Simonite, with Robert Lord, good, 4th with Josh. Crossland, and 6th with Edward Adams; 5th, Mr. E. Shaw, with Admiral Curzon. About 40 blooms were shown, all of fair quality, but nothing startling.—*Crimson Bizarres*: 1st, Mr. W. Taylor, with Master Fred, extra fine; 2nd, Mr. J. Whittam, with Master Fred; 3rd and 5th, Mr. B. Simonite, with J. D. Hextall; 4th, Mr. R. Gorton, with William Skirving; 6th, Mr. G. Geggie, with J. D. Hextall. About 30 blooms were exhibited, of very fair quality throughout.—*Pink and Purple Bizarres*: 1st, Mr. T. Maddock, with Sarah Payne; 2nd and 4th, Mr. F. Law, with James Taylor; 3rd, Mr. J. Blackley, 5th Mr. E. Shaw, and 6th Mr. J. Whittam, all with James Taylor.—*Scarlet Flakes*: 1st, Mr. J. Blackley, with Clipper, very good; 2nd, Mr. B. Simonite, with Sportsman, 6th with Seedling; 3rd, Mr. G. Geggie, with Ivanhoe; 4th and 5th, Mr. R. Gorton, with John Ball.—*Rose Flakes*: 1st, Mr. G. Geggie, with Mrs. Dodwell, fine; 2nd, Mr. R. Gorton, with Rob Roy; 3rd, Mr. W. Slack, Chesterfield, with Sybil; 4th, Mr. B. Simonite, with James Merryweather; 5th, Mr. Thomas Maddock, with James Merryweather, and 6th with George Henry. About 50 blooms were shown.—*Purple Flakes*: 1st, Mr. R. Lord, with Dr. Foster, fine, 4th with James Douglas, and 5th with Dr. Foster; 2nd Mr. J. Whittam, and 3rd Mr. B. Simonite, with James Douglas; 6th, Mr. T. Maddock, with Mayor of Nottingham. About 50 blooms exhibited.

The Premier Carnation was Hewitt's *Master Fred* C.B., a grand bloom shown by Mr. Slack.

PICOTEEES.

Class B. 12 blooms, dissimilar.—1st, Mr. B. Simonite, with Mrs. Niven H.P., Seedling L.R., fine, Zerlina H.P., Mrs. Gorton L.R.; Seedling M.R.O., very fine broad petal, bright and clean; J. B. Bryant H.R., Thomas William L.R.; Seedling, scarlet edge, very fine, Clara Penson L.P., Lady Holmsdale H.R.O. Seedling L.P., fine, Muriel H.P., fine. 2nd, Mr. Jonathan Booth, with Zerlina H.P., Her Majesty L.P., William Summers, Brunetto H.R., Miss Wood L.R.O., Mrs. Lord H.R.O., Mrs. Allcroft L.R.O., Minnie L.P., Miss Horner L.R.O., Mary L.P., Nymph L.P., Picco L.P. 3rd, Mr. G. Geggie. 4th, Mr. J. Kitching. We have rarely, if ever, seen better quality and finer flowers than Mr. B. Simonite had in his stand; they were remarkably good, notably the Seedlings, two of which were medium, or rather light rose edges, and were splendid specimens, so much so indeed we thought one of them ought to have been the Premier Picotee. He also had Mrs. Gorton, Clara Penson, and Thomas William, very fine, though all were high class, and he *won in a canter*, notwithstanding the other exhibits, notably the second prize lot, comprised some very choice blooms.

Class D. 12 blooms, 9 dissimilar.—1st, Mr. R. Gorton, with Thomas William L.R., Mrs. Allcroft

L.R.O., Zerlina H.P., Clara Penson L.P., Zerlina H.P., Fanny Helen H.R.O., Clara Penson L.P., Lady Louisa H.R.O., Ethel L.R.O., Rev. F. D. Horner L.R., Alliance H.P., Ann Lord L.P. 2nd, Mr. F. Law. 3rd, Mr. E. Shaw. 4th, Mr. W. Slack. 5th, Mr. W. Taylor. There were three other exhibitors. The best flowers in the first stand were Thomas William, Ann Lord, Clara Penson, and Mrs. Allcroft. The flowers of the other exhibits lacked uniformity, although in single instances, with intervals, some fine specimens were shown.

Class F. 6 blooms, dissimilar.—1st, Mr. Whitham, with Zerlina H.P., John Smith H.R., Ann Lord L.P., Miss Horner L.R.O., Alliance H.P., Thomas William L.R. 2nd, Mr. Thos. Maddock. 3rd, Mr. Jos. Blackley. 4th, Mr. H. Gill, Wakefield. 5th, Mr. Josh. Kitching. 6th, Mr. R. Lord, Todmorden. The winning stand contained six remarkably fine flowers of good size and quality—John Smith H.R., and Miss Horner L.R.O., being exceptionally noticeable.

Class G. Single blooms.—*Heavy Reds*: 1st, Mr. J. Whitham, with John Smith; 2nd, Mr. T. Maddock, with Mrs. Small, very fine medium edge, 3rd, with J. B. Bryant, 4th, with Brunette. About 20 flowers were shown.—*Light Reds*: 1st and 2nd, Mr. B. Simonite, with Mrs. Gorton, fine; 3rd, 4th, and 5th, Mr. R. Gorton, with Thomas William.—*Heavy Purples*: 1st and 3rd, Mr. J. Whitham, with Zerlina; 2nd, 4th, and 6th, Mr. B. Simonite, with Mrs. Niven; 5th, Mr. F. Law with Zerlina. A very fair lot of blooms.—*Light Purples*: 1st and 6th, Mr. J. Whitham, with Nymph, 5th with Ann Lord; 2nd, Mr. Lord, with Clara Penson; 3rd, Mr. T. Maddock, with Ann Lord; 4th, Mr. E. Shaw, with Her Majesty. There were about 40 exhibits including some good flowers.—*Heavy Roses*: 1st, Mr. J. Whitham, with Lady Holmesdale, very fine, 2nd, with Miss Horner, also fine; 3rd, Mr. J. Blackley, with Miss Horner, very fine; 4th, Mr. T. Maddock, with Mrs. Rudd; 5th, Mr. R. Lord, with Mrs. Lord; 6th, Mr. Wm. Slack, with Seedling. 50 blooms exhibited. Miss Horner was well shown.—*Light Roses*: 1st, Mr. J. Whitham, with Mrs. Allcroft; 2nd and 6th, Mr. F. Law, with Mrs. Allcroft; 3rd, Mr. B. Simonite with Seedling, 4th with Miss Wood; 5th, Mr. Gorton, with Mrs. Allcroft.

The Premier Picotee was Lord's *Zerlina* H.P., shown by Mr. Whitham.

SELFS AND FANCIES.

Extra Class. 12 blooms, self colours only.—1st, Mr. B. Simonite; 2nd, Mr. R. Lord. Two very showy collections, containing some richly-coloured flowers. Mr. R. Gorton also competed.

Extra Class. 12 blooms, fancies—run bizarres or any other combination, excluding selfs.—1st, Mr. George Geggie; 2nd, Mr. R. Gorton. There was one other exhibit; some fairish flowers were shown, but nothing very good.

Of all the flowers exhibited at Manchester Hewitt's *Master Fred* attracted the most attention and was most talked about, the growers present being unanimous in the opinion that the variety had never been previously seen to such advantage. Mr. Slack's premier flower was a wonder, and the variety was well shown by several other exhibitors. Mr. B. Simonite's 12 Picotees, also, were far above an average lot; they were A 1 in every particular, a fine evenly balanced lot of very high-class flowers of which he might well be proud.

There were more exhibitors and conse-

quently more competition than usual; Messrs. Maddock and Gill from Wakefield, Mr. Whitham from Hebden Bridge, Mr. Blackley and Mr. Law being amongst the most prominent and successful of the new-comers. The show was well attended. The organ recital, heretofore a prominent and most enjoyable feature of these exhibitions, was not provided, and this *laches* of the management, we are informed, provoked much uncomplimentary remark.

BURY CARNATION SHOW.

An Exhibition of Carnations and Picotees was held at Bury on August 18th, where a great number of blooms—more than at Manchester—and of fine quality too, were staged. In the open class for twelve's Mr. R. Lord, of Todmorden, was first—both in Carnations and Picotees, and in each case Mr. John Beswick of Middleton was 2nd, amongst 7 competitors. The premier Carnation was an exceptionally grand specimen of Admiral Curzon s.b., shown by Mr. Lord, not large, but magnificent in quality. Verily Curzon in that form—is still “Cock of the Walk.” The premier Picotee was Thos. William L.R., shown by Mr. Whitham of Hebden Bridge.

The small classes specially intended for the encouragement of beginners and maiden growers were well patronised. Altogether the show was a great success.

EPHRAIM SYMS DODWELL.

IN the portrait of our friend and fellow-labourer Mr. E. S. Dodwell, which by the courtesy of the Editor of the *Gardeners' Chronicle* we here present to our readers, we give, alike with two others which have preceded it, the presentment of an eminently representative florist. Mr. Horner in Auriculas, Mr. Barlow in Tulips, and Mr. Dodwell in Carnations and Picotees, respectively occupy positions of supremacy, accorded to them by the universal voice of their fellows, and by none more heartily than those who, nearest to them in attainment, are best qualified to judge of their work and its merit.

As one of the Honorary Secretaries of the Southern Section of the National Auricula Society, and also of the National Carnation and Picotee Society, Mr. Dodwell is as well known in the South of England as in the Midland districts, where he resided for so many years. Like many another man whose good fortune it has been to contribute to the lists of florists' flowers, varieties that will be grown for years to come, he is much more widely known by reputation than in person; so that many will look upon

the accompanying portrait with feelings of gratitude as well as of interest. A man of great energy of character and almost invincible determination, Mr. Dodwell has for a period of five and thirty years been a prominent figure in the ranks of florists, and he is as greatly respected and admired as his name is widely known.

From his boyhood Mr. Dodwell had a keen delight in Nature. In imparting some recollections of his early life Mr. Dodwell writes:—
“A severe attack of scarlatina in my eighth year quite broke up my health—never robust; and for three years I was the victim of the then orthodox and merciless medical practice. The unfortunate patient, however, was not cured, and did not die; and so, after three years of experiment, I was given over as incurable, and left to a loving mother's care. A beneficial change was soon apparent, and instead of lying helpless in my invalid's chair—in which on every favourable occasion I was drawn out for change of air—I was able to sit up, and then, leaving it for a brief while, wander in the sheltered nooks and sunny glades to which I had been taken, amid grass, and leaves, and flowers, which were to me a source of never-failing delight and repose. My grandfather, in a wing of whose house I was born, was the possessor of a fine orchard, and, for the locality, a superior garden. Here, regularly in the season, came a village worthy well versed in the cultivation of fruits and flowers, to prune and train and propagate as the time demanded and the subject required. I watched his work with attention and an ever-increasing interest, and soon was permitted to call a little plot of garden mine. So began my love for the garden and delight in the beauties of Nature. With the partial re-establishment of my health I went again to school, and then, soon after I had reached my fifteenth year, was placed in London—a post in a large commercial house having been given me by a gentleman of high standing and repute in the City.” Thus began the weakness of constitution which has remained to Mr. Dodwell until this day, and that love for flowers which he will never lose until his life shall have run its course.

How the young clerk pined for home and his plot of garden ground can be imagined. The

work of the counting-house kept him employed twelve hours daily, and when it was over there was but little leisure. But he found compensation for his loss of country life in becoming a member of the City of London Literary and Scientific Institution, then at its zenith, and in its reading-room, library, discussion and music classes found a source of interest and information which has served him to good

limited to the cultivators of a few florists' flowers he recommended its expansion and the reconstitution of the existing Society upon an open basis, and was elected its Honorary Secretary—the late Duke of Devonshire kindly accepting the office of President. For a few years the Society struggled against adverse influences, but patience and perseverance prevailed, and before seven



EPHRAIM SYMS DODWELL.

purpose throughout a useful life. Before Mr. Dodwell was twenty-one years of age he was made chief clerk to the house, but having experienced indications that his health would not long sustain the strain laid upon it, in 1844 he exchanged his position for one of a similar kind in the then largest manufacturing house at Derby. There was renewed his work in the garden. Mr. Dodwell commenced to form a collection of Carnations and Picotees; he visited Mr. Charles Turner, then in business at Chalvey, to see the best flowers grown; and later at the Royal Nursery, Slough.

Here, in his new sphere of labour, he sought to stir up floricultural aptitudes, and finding the exhibition at Derby at that time

years had passed the Midland Horticultural Society was known as one of the most successful of provincial associations—successful, that is, in the skill and note of its leading exhibitors. “The institution of the Society,” writes Mr. Dodwell, “and its work brought to me a host of friends, now, alas! mostly passed over to the majority, whose genial recognition and kindly sympathy will ever remain amongst my most prized remembrances. Some few, indeed, remain, though in some cases, like myself, the force and vigour of life has much abated, and it is a most grateful satisfaction to me to know there is no diminution of their kindly sympathy or genial regard; whilst of my friends and following of a younger generation who have come forward and filled the

vacancies in our ranks, I feel I cannot too gratefully speak of the honours they have so generously and spontaneously heaped upon me."

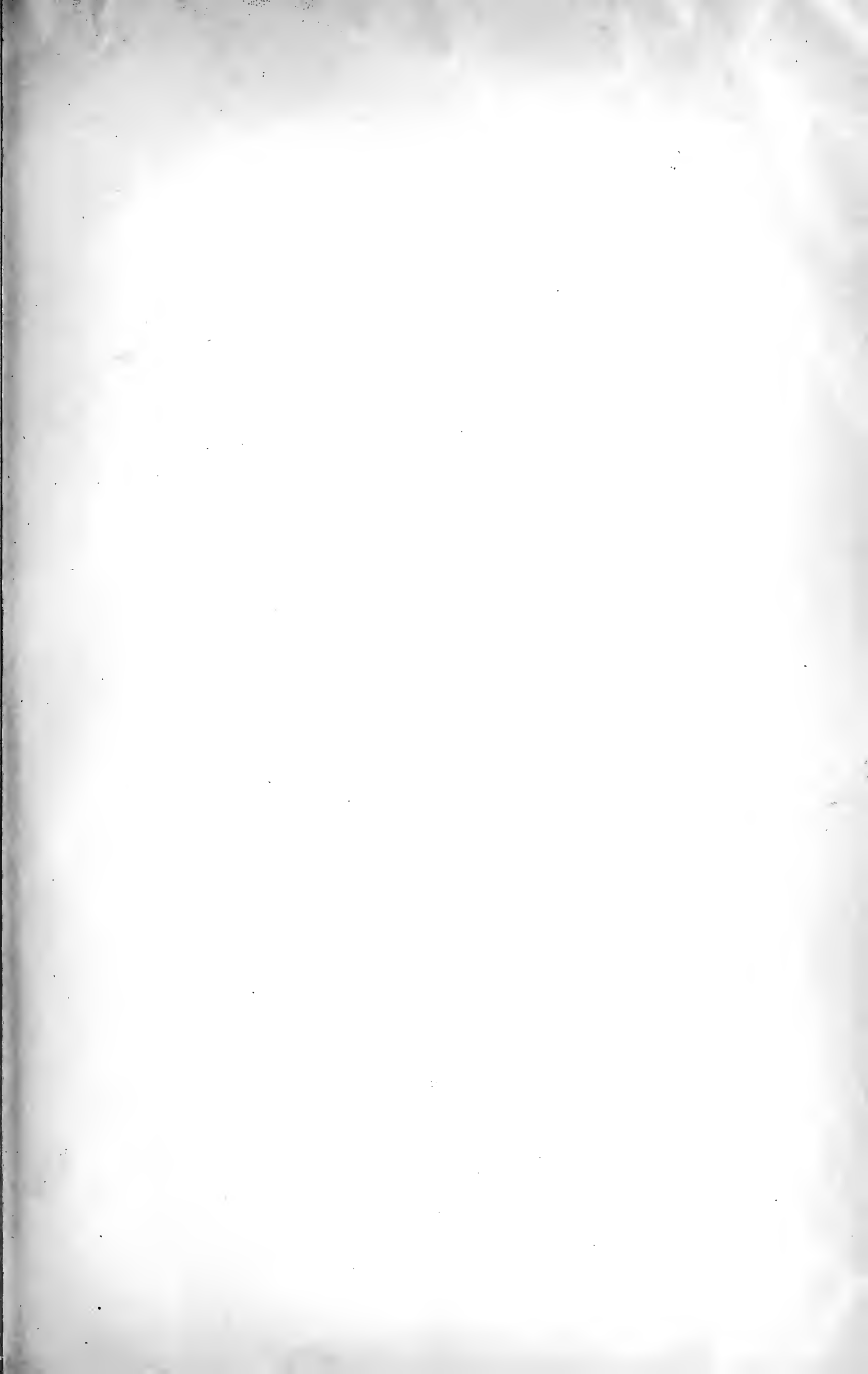
Of Mr. Dodwell's work as a cultivator it may be stated that his business engagements at Derby permitted no leisure for competition outside the Carnation and Picotee. Of his success as a seedling raiser we may speak with more freedom. By working on a well-known and recognised law of physiological development—the law of selection of parents—from the first success attended his efforts, which even to this day he regards as surprising. And the success which has come to him in these later days has simply enlarged and extended that surprise. Let it not be thought that Mr. Dodwell is in any degree oblivious of or thinks lightly of the efforts of his friends and friendly competitors in this sphere of work. It may be safely assumed that no one knows better, and no one, we are sure, rejoices more over the great and glowing results they have attained. And may we not say of raisers generally, that any sense of mere selfish gratification is lost in the more human and generous thought that they are working for the common good, and that success is valued in that it imparts an added delight to their fellow-men. "I have been ever sensible," writes Mr. Dodwell, "that the work I have been permitted to do has been limited in its scope, and appraised by the favour and sympathy of too partial friends at a value far beyond its deserts. None the less am I indebted to those of my friends, and none the less shall I omit to declare that I have worked with my whole might; I have revered and respected my work. Admitting and proclaiming the insignificance and fallibility of the individual, I can admit neither insignificance nor unworthiness in the pursuit. I feel, to adopt the language of the late Rev. George Jeans, 'it is elegant, instructive, scientific, and full of results.'"

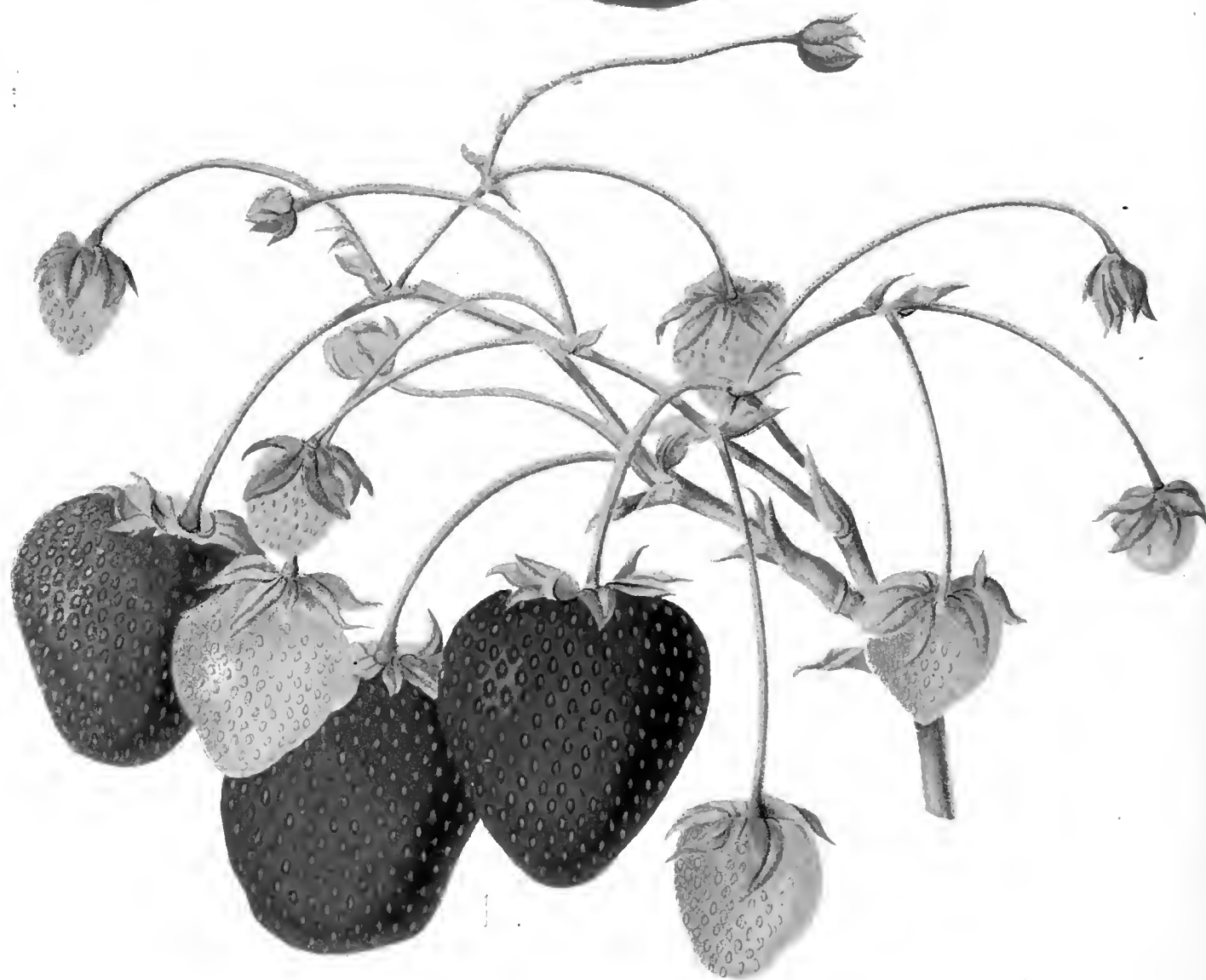
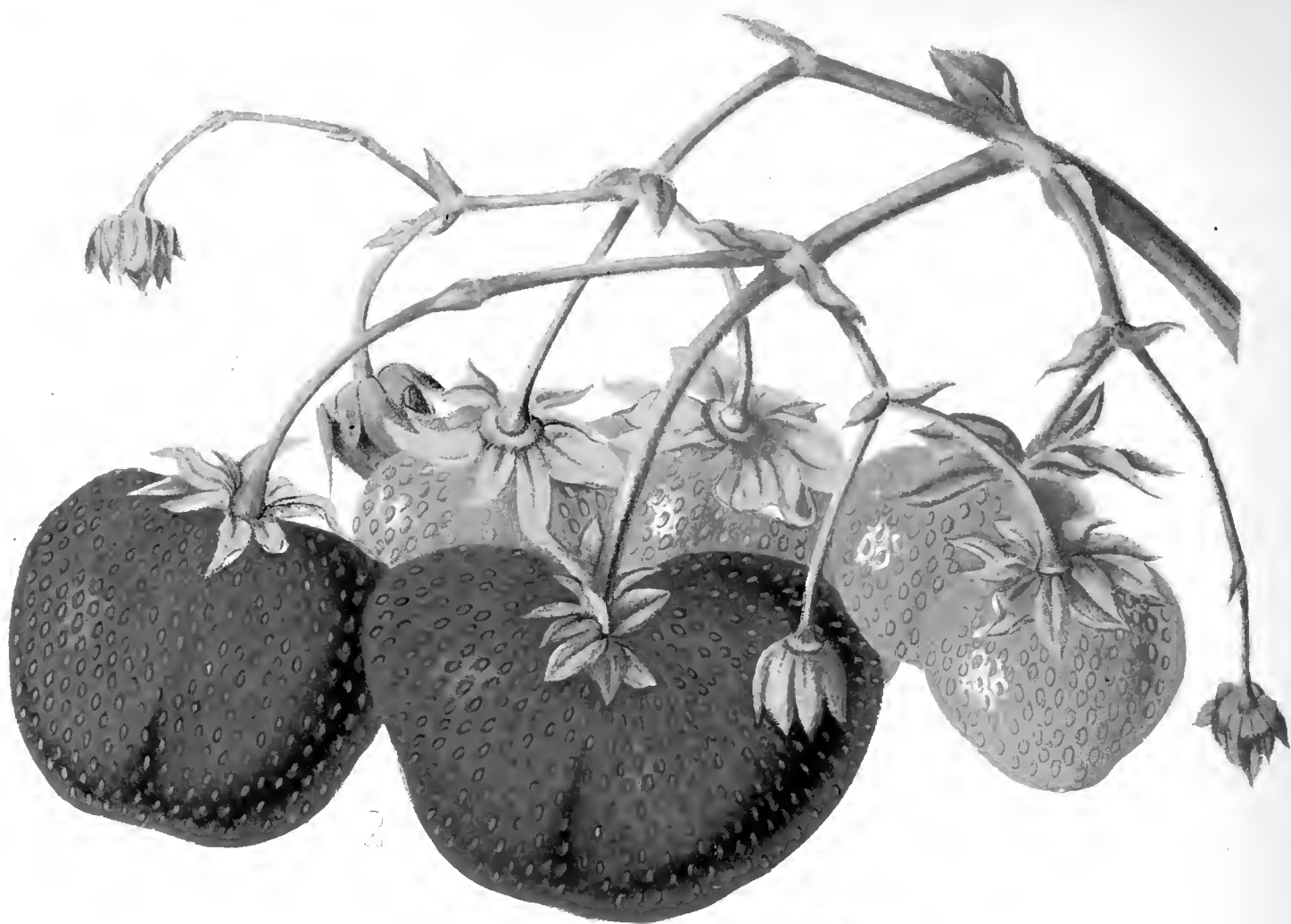
Twice in the course of his long floricultural life Mr. Dodwell has had conveyed to him the sense of his friends and fellows on the value of his work in that form in which, operating on his pocket, is said by cynics to be the most conclusive evidence of an Englishman's opinion—first in 1854, and then again in 1881, when from broken health Mr.

Dodwell was necessitated to take rest and relief in a purer air than that of Clapham. On the first occasion advantage was taken of the annual exhibition of the National Carnation and Picotee Society at Derby, on August 8, when there was a large gathering of florists, and particularly of those interested in the Carnation and Picotee. The chair was taken by the late Mr. John Edwards, and the presentation was made by the late Mr. John Frederick Wood, editor of the *Midland Florist*, who, among other things, said, "Years ago, before he knew Mr. Dodwell, he (Mr. Wood) used to visit Derby as a judge, and though his friends were then in earnest—they heartily desired to present their flowers worthily before the public—he must say their exhibitions were very insignificant. Earnestly as they strove there was a want—and a very large want—always perceptible. There was a want of arrangement—a want of effect; in fine, there was a want of a master mind. Mr. Dodwell came amongst them, a total stranger; he had no ordinary difficulties to surmount, but with unflagging energy, indomitable perseverance, and unconquerable pluck—choosing always to do that which was right, and to oppose that which was wrong—he had steadily pressed on until Derby, from a fourth or fifth-rate position, might proudly say her exhibitions gave place to none in the provinces." Undoubtedly in the qualities ascribed by Mr. Wood to Mr. Dodwell we have the key to the position which he holds amongst his fellows, for they are qualities which create confidence and command respect.

As a cultivator, no less than as a raiser, Mr. Dodwell has been remarkably successful; and his work at Clapham demonstrated what may be effected in the teeth of much difficulty, as well as the remarkable adaptability of the Carnation especially, as a subject for town cultivation. As a raiser, his productions not only have outnumbered those of any of his contemporaries, but their excellence has been of the highest order. So marked indeed has this been, that since their distribution, some one or other of his varieties have invariably attained the highest honours of the show—the premiership of the day.

But it is not alone as a cultivator and raiser our friend is known, and will be long remem-





J. H. Moore & Co.

Washington, D.C.

Chrom. Stroobant Ghent

1. King of the Earlies. 2. The Captain

bered. His association with, and upon the retirement of Mr. Wood from ill-health, his direction of the *Midland Florist*, and subsequently *Gossip of the Garden*, made him widely and honourably known; and his contributions to these works, and those which will be found in our pages—especially those in our volumes for the years 1875, 1876, 1877, and 1878—comprise essays on the subject of the cultivation of Carnations and Picotees, their management for exhibition, the points or properties most to be valued in the flower, a description of the varieties most valued, and the treatment likely most to influence their development, which may fairly be said to be exhaustive, forming indeed the most complete literature of these flowers of any in existence.

In a future issue we hope to find space for a record of some of the principal varieties raised by our friend, and meanwhile we are sure all interested in the development of the Dianthus will join us in the wish expressed by our esteemed contemporary, viz., that “the record of his (Mr. Dodwell’s) achievements may be extended yet over not a few years.”—T. M.

LAXTON'S NEW STRAWBERRIES.

[PLATE 594.]

OUR illustration of the new varieties of Strawberries introduced by Mr. Thomas Laxton, of Bedford, was prepared from typical samples of the fruit supplied by him in June last. They appear to have considerable merit, the one for its earliness and richness of flavour, the other for a certain perpetual bearing character, which if constant will add much to its value as a market variety. We give below our notes on the samples which came before us, and Mr. Laxton’s account of their origin:—

Fig. 1. KING OF THE EARLIES: *fruit* ovate or truncately ovate, with an even surface, of medium size; *skin* very dark crimson on the sunny side; *flesh* solid to the core, the inner portion whitish tinged with red, becoming scarlet near the outer surface; *flavour* excellent, exceedingly rich, with a most agreeable aroma slightly suggestive of the flavour of the Hautbois.

Mr. Laxton informs us that “this variety was raised from Vicomtesse Hericart de Thury

fertilised with pollen from Black Prince. It comes as early as May Queen, and in advance of both the parent varieties. In its fruit, King of the Earlies has the full size of the Vicomtesse, while the foliage and habit approach more nearly to those of Black Prince. The variety proves to be a most continuous bearer, having the great fertility of its parents; in other respects its characters appear intermediate. My object in making the cross was to obtain a first early market Strawberry, in which I believe I have been successful. The variety was much approved by the Fruit Committee of the Royal Horticultural Society.”

Fig 2. THE CAPTAIN: *fruit* ovate or often cock’s-comb shaped, of large size, the surface even; *skin* bright glossy crimson; *flesh* firm, hollow at the core, tinged throughout with scarlet, which becomes brighter near the outer surface; *flavour* briskly subacid, with a fine aroma, very pleasant and refreshing.

This, Mr. Laxton informs us, was “raised from Crown Prince crossed with Forman’s Excelsior. It is a large and handsome-fruited variety, of fine flavour, and of a bright scarlet colour throughout. It comes into use a few days after King of the Earlies and before Marguerite. If the plants be subjected to the usual check from summer heat, and the runners are removed early, the plants and often the runners themselves will bear fruit of full size freely in the autumn. This was especially noticeable last season, and the fruits had to be protected from the wasps—a requirement rarely necessary with Strawberries. The plant is very hardy and vigorous, but does not make runners excessively.”—T. MOORE.

HEITON HOUSE APPLE.

I ENCLOSE a sample of this most useful apple, which I intended to have done when it was in its prime, viz., from October to the end of April. I cannot find it in any catalogue, neither have I seen it in any of the great fruit-growing districts of England. The sample enclosed does not represent its highest quality, either in size or any other way, except as to shape. The crops which for many years have been said to be produced here every season, are

enormous, the trees being always clustered with fruit all over. The Stirling Castle, which is also a certain bearer every year, is in use earlier, but is not often found in good condition after February. It is the practice with many persons to grow extensive collections of apples, many of which seldom bear, but for usefulness we prefer small selections of kinds which are certain bearers every year, and this Heiton House, which is a capital kitchen apple in its season, never fails. Trees which were loaded to breaking last year are the same this season.—M. T., *Stirlingshire*.

PROTECTING SMALL FRUITS.

THE culture of small fruits receives some considerable attention in this country (U.S.A.), not only as a matter of commerce but in farm gardens. We have plantations covering a hundred acres devoted to strawberries. Other fruit-growers devote their entire farms to raspberries, grapes, &c. These fruit-growers are specialists, and their practice serves to illustrate the importance of fruit-growing.

But the importance of fruit-growing in this country is not due to the fact that some few men make a specialty of the business; not at all. It is hard to find the farm that has not some variety of small fruit. It may be but a small plot of strawberries, or a half-dozen currant bushes, or a much more elaborate list of fruit, but all farm-houses have a kitchen garden, some portion of which is devoted to small fruits. I have strawberries, raspberries, gooseberries, currants, cherries, plums, and grapes. My varieties of grapes embrace Eumelan, Hartford Prolific, Champion, Rogers' No. 9, Rogers' No. 15, Salem, Delaware, Concord, and several other sorts.

I will leave other information concerning my garden to future papers and describe an ingenious device I have adopted for protecting my grapes from poultry and birds. I refer to "bagging," which is generally practised by small vineyardists. Small sacks cheaply made of strong manilla paper are drawn over the cluster of grapes and pinned firmly in position. Some considerable experience demonstrates that fruit will ripen just as early, and colour as well, in bags as in the open air.

And the precaution is a perfect protection against birds and fowls.

I have found that it answers just as well to pin a newspaper broadside to the grape trellis, provided both sides are protected in the same manner. Those who have never tried this method of protecting their grapes should do so.—FORREST K. MORELAND, *Maple Grove Farm, Ogdensburg, U.S.A.*

ORCHIDS IN THE DRAWING ROOM.

WE often hear objections made to the growing of Orchids, on account of the great heat which, it is alleged, has to be kept up in the houses required for their cultivation. Many ladies and gentlemen indeed do not care to go into these moist and heated structures, but there are many ways in which Orchids may be seen and enjoyed without even entering the houses devoted to their culture. As an instance of this, the arrangements adopted by O. O. Wrigley, Esq., of Bury, may be referred to. This gentleman has built a warm conservatory adjoining his drawing room, and he kindly showed me how he made use of this to ensure an accessible display of plants in bloom. A window in the drawing room looks directly into this conservatory, and thus the beautiful flowers are brought fully into view without any kind of trouble or inconvenience. The ladies have not to go to the plants, but the plants are brought to them, and being plunged in a bed of bright green *Selaginella*, and mixed with choice ferns, they have altogether a beautiful effect.

The display is not always produced by Orchids, but sometimes by one kind of flower and sometimes by another. Thus at one time the flowers may be Gloxinias, and at another time Odontoglots, but whatever they may be they are arranged on the green mossy bed of *Selaginella*, and being overhung with ferns produce a thoroughly charming and pleasing picture. The flowering plants can always be removed as soon as they show signs of decadence, and be replaced by others which are fresh and fair. There are many cool Orchids that can be treated in this way, and the frequent changes increase the interest of the group, by securing freshness and variety.

We think Mr. Wrigley's idea of introducing his grand blooming Orchids to the notice of his family and friends without compelling them to go through the heated houses in order to see them, a very excellent one, and valuable at all times, but especially during winter, when ladies are often prevented by the damp and foggy atmosphere from venturing out of doors. The window, which consists of a large sheet of plate glass, effectually prevents any damp from entering the drawing room; and through it one gets a full view of the flowery scene. It is to be regretted that this, or some similar arrangement, is not more frequently adopted, as it may generally be carried out with very little trouble and expense.—B. S. WILLIAMS, *Victoria Nursery, Upper Holloway.*

REGISTER OF NOVELTIES.

NEW PLANTS.

CATTLEYA SUPERBA SPLENDENS, *Lemaire (L'Illust. Hort., t. 607).*—An extraordinarily beautiful variety, with the general habit of *C. superba*, but producing very richly coloured flowers, which are produced from three to seven on a spike, the sepals and petals of a deep rosy purple, and the lip in front rich rosy violet flushed with maroon. Native of the Rio Negro. The form shown was exceedingly fine. 1st-class Certificate R.H.S., July 10; J. Bockett, Esq.

CLEMATIS JACKMANNI ALBA, *Hort. Noble.*—This variety is not exactly a novelty having been first exhibited some years since in the cut state, but it has been again brought forward in the form of a well-bloomed specimen plant. It has the foliage and habit of *C. Jackmanni*, but the flowers, some four-some six-petalled, are white with just the faintest tint of pale blue or grey, the general effect being that of a white flower. If it proves to be a free-grower it will be very desirable as a white form of the hardy *Jackmanni* race, but for purity of colour it does not compare with some of the varieties already long known, *lanuginosa candida* for example. It is a garden variety raised at the Bagshot Nursery; 1st-class Certificate R.H.S., July 24; C. Noble.

FICUS ELASTICA ALBO-VARIEGATA, *Hort. (Gard. Chron., N.S., xx., 120).*—A fine and distinctly variegated variety of the India-rubber plant, in which the leaves are handsomely mottled with various shades of yellow, creamy-white and green. This very handsome stove shrub received a 1st-class Certificate R.H.S., July 24; R. P. Ker & Son.

GREVILLEA PUNICEA, *R. Br. (Bot. Mag., t. 6698).*—A handsome greenhouse evergreen shrub, with slender sinuous branches, elliptic-lanceolate leaves silky beneath, and nodding subumbellate heads of bright scarlet flowers produced in the spring months, and remarkable as in most of the species for their long projecting styles. Native of New South Wales; Kew.

GUZMANIA DEVANSAYANA, *E. Morr. (La Belg. Hort., 1883, t. 8—9).*—A handsome Bromeliad, producing a tuft of tall rigid smooth slightly spreading lanceolate leaves, which are enlarged and fuscous at the sheathing base, while the blade is channelled, and elegantly striped with reddish brown; from the centre of these leaves arises the flower scape, a foot

or so in height, terminating in a short oval spike of ovate acuminate scarlet bracts, which are closely imbricated, and from which the yellow tubular flowers just emerge in turn. Native of Ecuador, in the Province of Cuenca; MM. Jacob-Makoy.

NOTOSPARTIUM CARMICHAELIÆ, *Hook. f. (Gard. Chron., N.S., xx., 169, fig. 26).*—A half-hardy (or possibly hardy) shrub, with leafless twiggy branches, bearing numerous short lateral racemes of papilionaceous flowers of a bluish-purple colour, whence it is called by the colonists Pink Broom. The branches are sometimes long and flexible, sometimes short and stiff, leafless in the flowering stage, though the young plants bear small roundish or oblong leaves. Dr. Hooker describes the branches as being often pendulous, like whipcord. Native of New Zealand; grown for several years unprotected in the Combe Wood Nursery; Veitch & Sons.

NYMPHÆA ODORATA MINOR FL. ROSEIS, *Hook. f. (Bot. Mag., t. 6708).*—A charming water lily from the United States, having small orbicular leaves split to the petiole at the base, purplish beneath, the flowers about three inches across with a few rows of pale rose-coloured oblong petals, and a centre of yellow stamens. The plant has been flowering at Kew in the Tropical Water-lily house nearly all the summer.

ODONTOGLOSSUM EUGENES, *Hort. (Gard. Chron., N.S., xx., 120).*—A supposed natural hybrid, between *O. Pescatorei*, and *O. triumphans*, in which the sepals and petals are of an orange-yellow colour, white in the centre, and spotted with chestnut brown, the lip also being white spotted with brown, and having a yellow blotch on the base. Habitat not stated but probably New Grenada; grown at Trentham; 1st-class Certificate R.H.S., July 24; Z. Stevens.

SENECIO CONCOLOR, *De Candolle (Gard. Chron., N.S., xx., 75).*—A very pretty half hardy perennial allied to *S. speciosus*. It has radical leaves six or seven inches long, and narrowly oblanceolate in outline, and a loosely branched flowering stem 1—2 feet high, bearing corymbs of 3—5 flower heads, which have the ray florets mauve purple, the disk florets white and the anthers purple; native of South Africa; flowers in summer; Kew.

SPIRÆA PALMATA ALBA, *Hort.*—A white-flowered variety of the popular *S. palmata*, and as such a valuable addition to our decorative hardy herbaceous perennials. The blossoms are snow-white, without any tint of the rose-colour of the type; 1st-class Certificate R.H.S., July 24; Japan; Veitch & Sons.

TORENIA FLAVA, *Hamilton (Bot. Mag., t. 6700).*—A rather handsome trailing plant, with tetragonal stems, stalked ovate crenate leaves, and a long-stalked axillary or subracemose inflorescence, with tubular flowers having an oblique four-lobed limb of bright golden yellow, the throat being of a dark purple. It comes from India and Cochin China, and requires a moderately warm house in which it grows and blossoms freely in summer and autumn. It has been called *T. Bailloni* in gardens; Kew.

NEW FLOWERS.

BEGONIAS (Tuberousrooted).—*Countess of Rosslyn*, flowers very large and double; colour bright orange; petals stout and well rounded. *Mrs. Anson*, a very fine variety, the flowers single, very large, stout and finely formed, and of a warm scarlet colour; one of the finest varieties yet raised. *Miss Turner*, bright clear rose single flowers, very large and of fine form; striking in appearance. *Stanstead Surprise*, a very fine scarlet-flowered single variety, very large and of fine form. All the above awarded 1st-class Certificates, R.H.S., July 24; John Laing & Co. *Gabriel Leyxos*, a distinct double variety, the flowers good-sized, full, symmetrical, and of a delicate sulphur-

yellow colour; J. Laing & Co. *J. W. Perkins*, a double variety, remarkably floriferous; the flowers, which are not very large, are perfectly double, and of a rich deep scarlet crimson colour; a vigorous grower; 1st-class Certificate R.H.S., July 24; J. W. Perkins. *Virginalis*, a double-flowered variety producing large rosette-like creamy-white flowers; very full, symmetrical, and extra fine; 1st-class Certificate R.H.S., Aug. 14; W. Bealby.

CALOCHORTUS macrocarpus.—A rare and beautiful Californian bulbous plant, somewhat in the way of *C. venustus*; grows from one to two feet high, and bears flowers with pointed sepals and petals, the latter being of a beautiful purplish lilac colour; 1st-class Certificate R.H.S., July 24; T. S. Ware.

CANDYTUFT, *Biddles' New White Rocket*.—A distinct annual variety of vigorous growth, producing very fine rocket heads of large well-formed flowers of a pure white colour; 1st-class Certificate Atherstone Horticultural Society, Aug. 6; Biddles & Co.

CARNATIONS.—*Dorothy* (Dodwell), R.F., a pale but beautifully marked variety, of excellent properties, the flowers being large, highly-finished and distinct, with broad clearly-marked petals flaked with light rose; 1st prize N.C. and P.S., Slough, and 1st-class Certificate; E. S. Dodwell. *Henry Cannell* (Dodwell), S.F., a splendid novelty, bright in colour, of large size, with broad round stout smooth and well-marked petals; 1st prize N.C. and P.S., Kensington, and 1st-class Certificate; E. S. Dodwell and J. Douglas. *Mrs. Anstiss* (Dodwell), P.P.B., of splendid form, remarkable for its rich colouring, the pink bright, and the purple rich and deep; 1st prize N.C. and P.S., Slough, and 1st-class Certificate; E. S. Dodwell. *Mrs. Bridgewater* (Turner), R.F., a large full flower of considerable merit in the way of *Jessica*; clear and effective in colour, and of good substance; 2nd prize N.C. and P.S., Slough; C. Turner. *Rob Roy* (Gorton), R.F., a splendid novelty, possessing all the desired qualities in petal and colouring; 1st-prize N.C. and P.S., Kensington, and 1st-class Certificate; C. Turner. *Robin Hood* (Gorton), R.F., a flower of much promise; 2nd prize N.C. and P.S., Kensington; J. Douglas. *Samuel Barlow* (Dodwell), C.B., a grand flower, of large size, the outer petals broad and shell-like, with the flakes of colour bright and clear, and the crimson rich in tone; 1st prize N.C. and P.S., Slough, and 1st-class Certificate; E. S. Dodwell. *Squire Whitbourn* (Dodwell), P.F., a variety of fine properties, with the petals remarkably stout broad and smooth, the white very pure, and the flaking of a rich clear purple; 1st prize N.C. and P.S., Kensington, and 1st-class Certificate N.C. and P.S., Slough; J. Douglas and E. S. Dodwell. *Thomas Moore, Jun.* (Dodwell), C.B., a flower of a very attractive character, being large full smooth and richly marked; 1st prize N.C. and P.S., Kensington; J. Douglas.

Of *CLOVE CARNATIONS*: *Royal Purple* (Veitch), a very handsome flower of its class, with fine petal, and a very pleasing shade of colour, very rich, 1st-class Certificate N.C. and P.S., Kensington. *Sir Beauchamp Seymour* (Veitch), a handsome border flower, orange buff flaked and edged with pale bright red, and very freely produced; 1st-class Certificate N.C. and P.S., Kensington; both from Messrs. Veitch & Sons.

PICOTEE: *Mrs. Webb* (Turner), H.S.C., a fine addition to this beautiful and showy class, which should no longer be mixed up as it now is with the rose-edged sorts; the flowers are large smooth and of remarkable substance, the white pure, and the edging well marked; in the way of *Constance Heron*; 1st prize N.C. and P.S., Slough, and 1st-class Certificate; C. Turner.

COLEUS.—*Ellen Terry*, a remarkably fine and striking variety, the handsome leaves varied with

rich crimson, mottled with a deeper hue, and broadly margined with green and gold; 1st-class Certificate R.H.S., July 24; J. King. *Henry Irving*, a very richly-coloured variety, the leaves deep maroon-crimson mottled with brighter shades, and broadly edged with emerald green and golden yellow; 1st-class Certificate R.H.S., July 24; J. King.

GLADIOLUS.—*André Leroy*, white flaked with rose on the edges, purple throat, very pleasing, fine and effective; Vilmorin & Co. *Duke of Teck*, pale mauve, flaked and blotched with carmine, finely-formed flowers, and massive spike; Kelway & Son. *Grand Rouge*, vivid vermilion scarlet, large and well-formed flowers and massive spike; Vilmorin & Co. *Her Majesty*, pale rose with mauve flaked with magenta, fine spike, very effective; Kelway & Son. 1st-class Certificate to each of the foregoing, R.H.S., Aug. 14.

LILIUM, *pardalinum Warei*, a distinct and pretty variety of a clear lemon yellow entirely destitute of spots; and having yellow stamens, and small handsome turban-shaped flowers; 1st-class Certificate R.H.S., July 24. *Wallacei*, a very handsome form in the way of *L. venustum*, the colour bright clear apricot, copiously spotted with black; 1st-class Certificate R.H.S., August 14; both from T. S. Ware.

PELARGONIUM, *Jeanned'Arc*.—A charming double-flowered Ivy-leaved variety, the flowers white dashed with delicate lilac on large bold trusses; 1st-class Certificate R.H.S., August 14; W. Bealby.

SWEET PEA, *New Carmine Rose*.—A charming and very distinct variety, which is of a soft rose, the standard and wings being alike of the same tone of colour; an excellent addition to the named varieties of Sweet Peas; 1st-class Certificate R.H.S., Aug. 14; Hurst & Son.

NEW FRUITS.

APPLE, *W. E. Gladstone*.—A very early variety of good size and excellent quality, highly coloured, and supposed to be of Continental origin; 1st-class Certificate R.H.S., Aug. 14; H. Lane & Son, and L. Killick.

RASPBERRY, *Lord Beaconsfield*.—A new variety bearing large red fruits; a prolific bearer and of fine quality; 1st-class Certificate R.H.S., Aug. 14; A. Faulkner.

STRAWBERRY, *Duchess of Edinburgh*.—A variety bearing flattish fruits of high colour and excellent flavour; 1st-class Certificate R.H.S., July 24.

NEW VEGETABLES.

BEAN (*Long pod*), *John Harrison*.—A very fine selection made by Mr. T. Laxton, large, long, and handsome; 1st-class Certificate R.H.S., July 24; T. Laxton.

TOMATO, *Bowerman's Prolific*.—A variety producing large and handsome smooth deep red fruits in great abundance; 1st-class Certificate R.H.S., July 24; W. Bowerman.

NEW PUBLICATIONS.

The *BOTANICAL MAGAZINE* (July—Aug.) contains the following coloured plates:—*Grevillea punicea*, R. Br. [t. 6698], a pretty greenhouse evergreen, with heads of scarlet flowers; Kew.—*Gypsophila cerastoides*, Don [t. 6699], a Himalayan perennial of dwarf habit, densely pubescent, with numerous branches bearing small spatulate or oblanceolate leaves, and terminal cymes of small five-petalled white or whitish flowers, having three red veins on each petal; adapted for rockwork; Kew.—*Torenia flava*, Hamilton [t. 6700], the T. Bailloni of gardens, a trailing plant, with ovate crenate leaves, and axillary or subracemose flowers of a deep yellow with a deep purple tube and throat; it comes from India and Cochin China, and requires a moderately warm house; Kew.—*Eranthemum borneense*, Hook. f.

[t. 6701], a stout-growing stove soft-wooded shrub, with largish ovate-oblong acuminate leaves, and short dense terminal spikes of white flowers having a lemon tinge on the lower segment; found by Mr. Curtis in N. W. Borneo; Veitch & Sons.—*Saxifraga marginata*, Sternb. [t. 6702], a dwarf rock plant from S. Italy and Greece, tufted, with rosettes of cuneate-obovate obtuse leaves, ciliate at the base, and having the margins pitted and secreting lime; the short flower stems bear linear erect leaves and terminate in a corymb of largish white flowers; presented by Mr. G. Maw to Kew.—*Campanula Jacobæa*, Chr. Smith [t. 6703], a fruticulose Bell-flower from the torrid and arid Cape de Verd Islands, requiring frame culture; it grows 2—3 feet high, with angular branches, sessile oblong-ovate semi-amplexicaul leaves, and nodding blue or greenish flowers; M. Leichtlin; Kew.—*Licuala grandis*, Wendl. [t. 6704], one of the most strikingly handsome of Palms, a native of New Britain. It has a bold crown of about a score of bright green leaves of a rounded cup-shaped form, folded up in innumerable plaits, and doubly cut round the margin. The trunk is comparatively short, and the crown of fronds ample. It is the *Pritchardia grandis* of gardens; introduced by Mr. W. Bull.—*Aloe prattensis*, Baker [t. 6705], a dwarf acaulescent species allied to *A. humilis*, the stout simple peduncle bearing a dense raceme of bright red flowers tipped with green; S. Africa; Justus Corderoy, Esq.—*Dendrobium revolutum*, Lindl. [t. 6706], a curious epiphyte, from the Malay peninsula, with distichous semi-amplexicaul oblong or ovate-oblong blunt or emarginate leaves, and small solitary axillary flowers with white curved sepals and petals, and an oblong quadrate greenish-yellow lip with a red band in the centre; Messrs. Loddiges & C. Peeke, Esq.—*Allium Macleanii*, Baker [t. 6707], a tall-growing Allium, with globose bulbs, 4—5 lanceolate glabrous leaves a foot long, and large globose umbels of purple flowers; native of Cabul; Kew.—*Nymphaea odorata minor fl. roseis*, Hook. f. [t. 6708], a beautiful small Water-lily, with orbicular leaves split at the base, and sweet-scented flowers of a delicate rose colour; United States; Kew.

GARTEN-ZEITUNG (July—Aug.) contains portraits of *Caraguata Fürstenbergiana*, Kirchhoff et Wittmack, a handsome Bromeliad, with long spreading or recurved ligulate greyish-green leaves, and a central cylindrical spike of yellow flowers in the axils of close set slightly spreading rose-coloured bracts; found by Roehl in Ecuador.—*Panacratium Sickenbergeri*, Ascherson & Schweinfurth, a new Amaryllid with bulbs as large as one's fist, 3—6 acute hysteranthous leaves, and an umbel of 3—6 white flowers with narrow perianth segments; it is found in Egypt and the deserts of Arabia.

L'ILLUSTRATION HORTICOLE (7 liv.) figures *Friesea heliconioides* [t. 490], a very handsome Bromeliad, known in gardens as *Friesea Falkenbergii*, and *Friesea bellula*, but whose correct name according to Prof. Morren is *F. heliconioides*; it is a pretty dwarf species, with green recurved leaves, and distichous spikes of flowers, the conspicuous parts of which are the scarlet yellowish-green tipped boat-shaped bracts; New Grenada; M. Linden.—*Dipladenia splendens profusa*, Hort. Williams [t. 491], one of the fine seedling varieties of *Dipladenia* raised in English gardens; the flowers are large and of an intense carmine red.—*Panax fruticosum Deleanum*, N. E. Brown [t. 492], a Polynesian shrub, with an erect green stem mottled with brown, and numerous digitately compound leaves, the divisions of which are 3—5 ternately or biternately divided, with cuneate-linear or obliquely subelliptic segments, toothed or lobate, the teeth white apiculate; it is a much dissected form of a very variable species.

REVUE DE L'HORTICULTURE BELGE, &c. (April) contains a figure of the *Golden Heliotrope Albert Delaux*, the foliage of which is handsomely tinted with golden yellow, while the flowers are large, of a deep purple. The numbers for July and August contain respectively *Carnation Madame Edouard Pynaert*, a large and showy flower with the petals deep salmony-buff at the base, paler at the edges, and like that called *Souvenir de la Malmaison* is an issue from *Dianthus lignosus*; and the two *Double Bouvardias*: *Alfred Neuner*, white, and *President Garfield*, rosy-pink; both are valuable and desirable decorative plants.

REVUE HORTICOLE (July 1—Aug. 16) has characteristic figures of *Billbergia thyrsoides splendida* (fastuosa on plate), a truly splendid Bromeliad which M. André identifies with the var. *splendida*. It has green serrated leaves, recurved at the tip, and a flowering stem clothed with large rosy-scarlet bracts, and terminating in a short spike of numerous flowers which are of a brilliant scarlet, with the tips violet; Dr. Chaumier.—*Liatris pycnostachya*, Mich., a very showy perennial with tuberous roots, stout erect stems crowded with linear leaves, and terminating in a long spike of rosy flowers; it belongs to the Compositæ, and coming from the south-eastern States of North America, sometimes requires slight protection in winter.—*Pear Marguerite Marillot*, a handsome variety raised by M. Marillot, of Craponne, near Lyons. The fruit is large oblong pyriform, brownish yellow at maturity, with a fine melting sugary flesh, and comes into use in October and November.—*Begonia Martiana gracilis* is a fine variety with very abundant rosy-pink flowers, which in favourable sunny positions forms a compact bush from three to four feet high, and flowers on until interrupted by frost.

BULLETIN D'ARBORICULTURE DE FLORICULTURE, &c. (June—July) figures *Pear Doyen de Ramegnies*, a variety raised by M. Bouzin, at Ramegnies-Chin, near Tournai, described as a fertile pyramidal tree, with turbinate fruit, of large size, smooth green, becoming yellow at maturity, with fine buttery melting sugary flesh, of excellent quality, ripe in October and November.—*Prunus Pissardi*, a handsome-looking hardy reddish-purple leaved Plum, of the Myrobalan group, introduced to French gardens from Persia, through the agency of M. Pissard, head gardener to the Shah. The fruits are small roundish-oval, and deep or purple red when they first appear, but as yet they have not set. French gardens.

LA BELGIQUE HORTICOLE (Mar.—April) contains a good figure of the handsome *Cypripedium barbatum Warnerianum* [t. 7], a variety with large highly-coloured flowers, and mottled leaves.—*Guzmania Devansayana*, Morren [t. 8—9], a tall-leaved Bromeliad, with the bases of the leaves enlarged and fuscous, and the upper part handsomely striate with reddish-brown; the flower scape is about half the length of the leaves, and terminates in a small oval spike of yellow flowers with closely imbricated scarlet bracts; native of Ecuador; MM. Jacob-Makoy.

GARTENFLORA (July) contains figures of *Hedysarum multijugum*, Maxim. [t. 1122], a hardy fruticose species from S. Mongolia, of slender habit, with pinnate leaves consisting of 20—40 oblong obtuse leaflets, and loose axillary racemes of small pink flowers; it forms a dense shrub 2—5 feet high, and flowers freely in summer; St. Petersburg.—*Pescatorea Lehmanni*, Rehb. f. [t. 1123], a beautiful epiphytal Orchid, with large flowers shaded by the leaves, of a deep violet colour striped with white towards the base; found in Columbia, and now in general cultivation.—*Taccarum Warmingianum*, Engl. [t. 1124], a giant Arad with tall-stalked pedato-

bipinnatifid green leaves of considerable size, and short-stalked brown spathes of a broadish oval outline ending in a short point; Brazil; W. Bull.

WILLS' COMPANION TO PRACTICAL BOTANY is a little book intended for the use of students, in which 100 common plants are described in a tabulated form, each occupying one page, with blank spaces for notes and memoranda, figures of the plants being in preparation and provision made for inserting them opposite the description. In the copy before us a few of the earlier figures are inserted in their places, and as cheap figures, to be issued we believe at one penny each, they are very well adapted for the purpose intended. Tables of the Candolle and the Linnæan systems of Classification are given.

NOMENCLATOR DER GEFÄSSKRYPTOGAMEN, von Carl Solomon (Leipzig, Hugo Voigt), is a most useful list of Ferns, giving their names, native country, and synonyms, but neither descriptions nor references to published descriptions or figures; hence it is virtually an abridged Index Filicum. It appears to be carefully compiled, and brought down to the present time, so that it will be a handy reference book for the names of ferns, and all the more so as the contents are arranged alphabetically. It forms a small volume of nearly 400 pages.

MUSHROOM CULTURE FOR AMATEURS, by W. J. May (London: L. Upcott Gill), contains a plain exposition of the various methods of growing these toothsome esculents, both indoors and out.

JOURNAL DES ROSES (August) contains a portrait of the *Rose Cramoisi Supérieur*, belonging to the section of Bengal or China Roses, well known in this country as an elegant pot-rose or a showy bedding variety.

The GARDENERS' CHRONICLE (July 14—Aug. 11) contains the following notices of novelties:—*Masdevallia marginella* (p. 38), a pretty dwarf epiphyte, with short-stalked spatulate leaves, and 1—2 flowered peduncles bearing white flowers, of which the cup is well developed, and the triangles and tails bent outwards; the petals lip and column are also white; F. Sander.—*Plagiolirion Horsmani*, Baker (p. 38), a new genus of Amaryllids allied to Eucharis, with ovoid bulbs, stalked oblong leaves, and scentless white flowers; Columbia; F. Horsman & Co.—*Rodriguezia Leeana*, Rehb. f. (p. 38), a curious novelty, with ancipitous pseudobulbs, linear-ligulate leaves, and pendulous racemes of white flowers, the sepals marked with a yellow line in the centre, and the lip with two long linear keels; the flowers have a brown spur; W. Lee, Esq.—*Amianthium muscatoxicum*, Gray (p. 41, fig. 7), a hardy perennial with dense spikes of cream-coloured flowers, noticed at p. 126 under the more correct name of *Zygadenus muscatoxicum*. The root when bruised and mixed with honey is said to act as a poison to flies.—*Cyrtandra pendula*, Blume (p. 70), a showy stove perennial, with a short stout somewhat creeping stem, elliptic leaves of a dark green with greyish blotches, and involucrate flowers having a swollen tube and elliptic-oblong lobes white with silky brown hairs outside, the inside dotted with purple on the lower side; Java; Kew.—*Spathanthemum heterandrum*, N. E. Brown (p. 70), an interesting Arad, supposed by Mr. Brown to be Bolivian and not African; it has solitary long-stalked erect elliptic leaves with deeply cut margins, and tall green scapes with a boat-shaped green spathe, and no distinct spadix, but bearing the flowers in rows along the middle of the spathe; Kew.—*Promenaea stapelioides heteroptera*, Rehb. f. (p. 70), a variety with the sepals only partially striped; Low & Co.—*Senecio concolor*, D. C. (p. 75), a pretty half-hardy perennial 1—2 feet high, with narrow oblanceolate leaves 5—7 inches long, and a loosely-branched glandular pubescent flowering stem supporting corymbs of

flower heads having mauve-purple ray florets, and the disk florets white; S. Africa; Kew.—*Gazania longiscapa*, D. C. (p. 77), the correct name of the entire linear-leaved bright yellow-flowered composite, known in gardens as *G. pinnata integrifolia* and *Gazaniopsis stenophylla*.—*Maxillaria irrorata*, Rehb. f. (p. 102), an epiphyte probably from the Western Andes, related to *M. grandiflora*, and having white flowers washed bordered and blotched with purple, the lip ochre-coloured with a purple margin; Sir C. W. Strickland, Bart.—*Cattleya Schröderiana*, Rehb. f. (p. 102), a splendid and distinct new species allied to *C. bulbosa*, with short stem-like costate pseudobulbs, stout oblong-ligulate acute leaves, and a two-flowered peduncle bearing mauve-purple flowers, the lip with minute lateral auricles, and a transverse oblong apiculate front lobe.—*Echmea Barleei*, Baker (p. 102), an acaulescent Bromeliad, with lance ensiform leaves having prickly margins and thinly lepidote, and an erect panicle with distichous yellow flowers, the bracts of the peduncle lanceolate bright red; British Honduras; Kew.—*Plagiolirion Horsmani*, Baker (p. 105, fig. 16), a woodcut of the New Columbian bulb, allied to Eucharis, described in *Gard. Chron.*, p. 38.—*Sarcopodium Dearei*, Hort. (p. 108, fig. 17), a pretty dwarf Indian Orchid with ovate compressed pseudobulbs, oblong acute petiolate leaves, and solitary flowers on radical scapes, of an olive yellow, the dorsal sepals with purple spots, and the lateral ones with blue stripes; the front lobe of the lip is singularly mobile; Lieut.-Col. Deare.—*Phacelia campanularia*, A. Gray (p. 135, fig. 25), a very handsome half-hardy Californian annual, with brilliant blue bell-shaped flowers an inch and a-half in breadth; W. Thompson.—*Acrosticum magnum*, Baker (p. 135), a large simple-fronded fern from British Guiana, which according to our views should be called *Elaphoglossum magnum*; it is allied to *E. perelegans*, and has sterile lanceolate fronds 2—3 feet long on stipes of 3—4 inches, green on both surfaces, with pale inconspicuous appressed scales on the upper side, and ferruginous spreading scales on the lower; fertile fronds not seen.—*Anguloa Ruckeri retusa*, Rehb. f. (p. 135), a remarkable variety with the flowers lemon-coloured outside, and covered with dark purple blotches within, the lip with rectangular side lobes, and small reflexed hairy middle lobe; W. Bull.—*Odontoglossum Schlieperianum flavidum*, Rehb. f. (p. 135), the *O. grande flavidum* of Klotzsch, a fine sulphur-coloured variety with light cinnamon bars at base of sepals and petals, orange at the base of the lip and on the callus; B. S. Williams.—*Rodgersia podophylla*, A. Gray (p. 140, fig. 23), a hardy herbaceous plant of stately habit, with large palmately-lobed leaves, and a flower-stem 3—4 feet high bearing a large pyramidal panicle of small white flowers; it belongs to the order of Saxifragæ; Japan; introduced by Veitch & Sons.—*Scilla livida*, Baker (p. 160), a Cape bulb, with cotemporary leaves, 6—8 in a rosette, and dense oblong racemes of green flowers tinged on the outside with dull purple; F. Horsman & Co.—*Trichopilia Kienastiana*, Rehb. f. (p. 166), a handsome plant allied to *T. suavis*; it has ligulate pseudobulbs two inches long, oblong-ligulate acute leaves, and two-flowered racemes of white flowers, having a few yellow lines or spots on the disc of the lip; Consul Kienast.—*Calanthe anchorifera*, Rehb. f. (p. 166), a Polyesian species related to *C. veratrifolia*, with whitish-ochre flowers, having the anterior lobe of the lip bent like an anchor; W. Bull.—*Caccinia glauca*, Savi (p. 173, fig. 27), a stout succulent perennial 1—2 feet high, with oblong-obovate glaucous leaves, and flowers with a remarkable angulate toothed calyx, and salver-shaped starry-limbed pale blue flowers, changing to

red; the old *Borago crassifolia* from Persia.—*Masdevallia Carderi*, Rehb. f. (p. 181, fig. 30), an interesting little plant, with oblong blunt leaves, and short peduncles, each bearing one soft fleshy bell-shaped flower, whitish outside, ochre-orange at the base, with a blackish-mauve zone between, the long yellow tails spotted with blackish-purple; Shuttleworth, Carder & Co.

GARDEN GOSSIP.

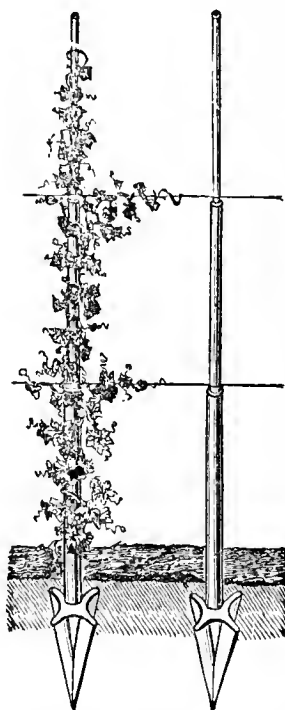
IN giving its usual returns of the state of the FRUIT CROP, the *Gardeners' Chronicle*, from which we quote, remarks, that "were all other fruits as thin as some are, yet would the splendid Apple crop, the very best without doubt, because so universally good, that we have had for ten years or more, suffice to mark 1883 as a red-letter year in the diaries of fruit-growers." The summary of the returns is as follows:—*Apples* everywhere most abundant—a truly grand crop. *Pears* equally thin; in a few favoured gardens there are fair crops, but generally the crop is poor. *Plums* universally thin, the best results being seen on walls; on orchard trees the produce is very poor, even *Damsons* being a failure. *Cherries* of all sweet kinds are few, apparently better in Scotland than elsewhere; but the returns probably chiefly apply to *Morellos*, which are fairly good, as usual. *Apricots* are a universal failure. *Peaches* and *Nectarines* are very fair generally, that is to say, in some places a heavy crop and in others thin; in Scotland and Ireland these are not largely grown on open walls; but in England and Wales all localities give good and indifferent returns alike, the fairly good ones predominating. *Bush Fruits* and *Strawberries* have been as universally abundant as *Apples* are, the season having specially favoured them. *Nuts* of the smaller kinds are a very poor crop, but in many localities *Walnuts* are fairly abundant.

— ONE of the most remarkable exhibitions of the season has been that of Mr. BULL'S ORCHIDS. For several weeks a continuous and varied display was kept up, such as to induce a great number of those who had seen it to repeat the visit several times. Such a profusion of beautiful examples of Orchids, arranged in one house, has never before been witnessed, and when tastefully mingled with rare Ferns and such graceful foliage as *Asparagus plumosus*, could not fail to prove attractive. The genial temperature of the house, too, in which they were staged, added much to the comfort and consequent gratification of visitors. This fact must have convinced many persons that it is a popular error that Orchids must always be kept in close houses. During the season there have been hundreds of grand varieties of *Odontoglossum vexillarium* and *O. Alexandræ*; grand masses of *Lælia purpurata*, gorgeous examples of *Cattleya gigas*, *C. Eldorado*, *C. Warneri*, *C. Mendelii*, and *C. Gaskelliana*, with some fine pans of *Disa grandiflora*, besides many others, which kept up the interest to the very last.

— THE trade in AMERICAN CANNED FRUIT and VEGETABLES has vastly increased during the past few years. In the city of San Francisco and Oakland there are eight large canning establishments, and in other parts of the State there are a few large and many small ones. About a year ago the city canners formed an incorporated company

for the protection of their several interests. They selected one of their number as the sole purchaser of all the fruit and vegetables required by the canneries, and this was strictly adhered to all through the year, and worked satisfactorily. It is estimated that these canneries pack over three-fourths of all that is packed in the State, and that more than half the fruit grown in the State is packed in them. The following is given as the result of the year's packing, all the quantities being in pounds:—*Apricots*, 3,087,740; *Asparagus*, 115,050; *Beans*, 89,109; *white Cherries*, 543,458; *dark Cherries*, 288,689; *Currants*, 475,321; *Gooseberries*, 102,418; *Grapes (Muscat)*, 923,588; *Grapes (Isabella)*, 24,337; *Peaches*, 2,763,781; *Bartlett Pears*, 2,216,484; *Peas*, 1,006,524; *Damsons*, 187,816; *Egg Plums*, 294,892; *Golden Drop Plums*, 141,014; *Blue Plums*, 153,509; *Prunes*, 151,390; *Gages*, 518,033; *Raspberries*, 60,132; *Strawberries*, 11,943; *Tomatoes*, 5,844,031; *Quinces*, 246,613; *Blackberries*, 412,798; *Apples*, 1,443,210.

— SOME samples of GALVANISED IRON STAKES (Borner's Patent) which have been submitted to us by Mr. F. Martin, of Walthamstow, and



of which one size is represented in the accompanying woodcut, appear to be worthy of commendation, not only on account of their durability, but from their utility in preventing the harbouring of insects upon the plants. They are made from 3 ft. to 8 ft. in height, and therefore serve for a variety of subjects, and though the first cost is more than that of ordinary wooden stakes, they are in the end more economical on account of their durable character, being practically imperishable. These stakes are so made that they may be used separately for the support of individual plants, or by means of rings, which slip on into their places, they can be wired so as to form espalier rails, while by means of a strong loop at the end an arch or

series of arches can be constructed at any height. They appear to us to be elegant substitutes for perishable wooden sticks and stakes, and therefore deserve to be recommended.

— IN reference to the AMARYLLIS, now again becoming popular, Mr. Douglas says in a contemporary:—Every grower of the highest forms of the Amaryllis should be a raiser of seedlings. Not only is the pleasure of anticipating new forms and new colours very great, but it is found that not a few of the best named varieties have a certain tendency to decrease in vigour as they increase in years; whereas seedlings flower better the first and second seasons of their flowering. Seedlings are very easily raised, and should be sown as soon as ripe. I sow about fifty seeds in a 6-inch pot; they vegetate in less than two weeks in a good bottom-heat and a cool stove temperature. When the first leaf has grown about two inches high the young seedlings may be planted out, a dozen of them in a 6-inch pot this time. They grow very rapidly during the late autumn months, nor do they cease growth all through

the winter. Early in February they may be repotted into the same sized pots, this time three or four plants in a pot. With care good large bulbs will be formed, which will almost be large enough to flower the next season; at any rate they may be potted singly in 5-inch or 6-inch pots, and will flower well the following season. The potting material that answers best for them is composed of two parts of good turfy loam to one of peat; a fourth part of rotten stable manure may be added to it, with some sand and powdered charcoal.

— THE SPARMANNIA AFRICANA FLORE-PLENO has obtained some notoriety as a useful winter-flowering greenhouse shrub. This double-flowered variety was sent out a year or two ago by Mr. Bull, and its large clusters of blossoms are so fine and so freely produced when the plant becomes well developed, that it is really a very useful and pleasing object.

— THE so-called new POLYPODIUM VULGARE TRICHOMANOIDES has been described as unquestionably the most elegantly subdivided of all hardy ferns, and the fronds to be all but equal in their beautiful appearance to those of *Todea superba*, while being evidently a free-grower it is said to be destined to hold a prominent place in collections of hardy ferns. On inquiry we learn that this variety is a selection from seedlings of the very handsome variety known as *cornubiense*; and it seems doubtful if the present variety differs from or is superior to that which is described in our volume for 1882 at p. 37, under the name of *P. vulgare cornubiense Fowleri*, the fronds of which are cut into excessively narrow lobes and segments.

— MR. BENNETT'S PEDIGREE ROSES, if not appreciated at their full worth in this country appear to be so elsewhere. It is stated that an enterprising Philadelphia plant merchant, Mr. Evans, has bought half the stock of the crimson Tea Rose, William Francis Bennett, for £750, and has legally bound himself not to sell or otherwise dispose of any bud, cutting, or scion, but only the flowers, for a term of four years. The Rose in question is not much known, except to those who have visited Mr. Bennett's Rose nursery at Shepperton, or previously at Stapleford, but it has made its mark in Covent Garden and other markets, many thousands of its bloom-buds having been sold at highly remunerative prices, it being one of the most persistent of winter bloomers.

— A NEW RED MIGNONETTE has been introduced by M. D. Guihèneuf, of Nantes, as we learn from the *Garden*. It is unlike any other variety, the dense spikes being a mass of orange red. It is a vigorous grower and of good habit, and having a very powerful perfume our contemporary thinks it will be an acquisition.

— THE little Japanese AZALEA OBTUSA ALBA exhibited last spring by Messrs. Veitch & Sons as a new plant at the Regent's Park, may be aptly described as chastely beautiful. It is a good counterpart of the type form introduced by Fortune, except that the flowers instead of being Indian red are snow white. They are borne in profusion even on small plants, and though individually small they clothe the plants so thickly as to make them look like masses of snow. We anticipate that it will prove valuable as a decorative plant.

— IN reference to the origin of the pretty name "SWEET WILLIAM," St. Clair Baddeley writes in the *Athenæum*—I beg to adduce the following passage from an able essay on flowers in the *Quarterly Review* of July, 1863. Speaking of the small red-pink *Dianthus profler*, the writer says:—"This is perhaps the original 'Sweet Saint William,' for the word 'Saint' has only been dropped since days which saw the demolition of St. William's shrine in Rochester Cathedral. This, however, is but a conjecture; and we must be content to remain uncertain whether the masses of bright flowers which form one of the chief glories of old-fashioned gardens commemorate St. William of Rochester, St. William of York, or, likeliest of the three, St. William of Aquitaine, the half-soldier, half-monk, whose fame was so widely spread throughout the South of Europe."

— THE somewhat novel NICOTIANA AFFINIS makes a very pretty bed in the garden. It grows 2 feet or more in height; the large white flowers which are abundantly produced in succession are in their best condition in the evening, when they diffuse a powerful fragrance that is perceptible for a great distance. Consequently, for beds near the house as well as for culture in pots this plant is most valuable.

— THE tiny WATER LILY known as *Nymphaea pygmaea*, is a pretty little species from India, China, &c. The *Garden* says, it may be grown out of doors in the summer, requiring only protection from severe frosts to maintain it in health. The leaves are not much larger than half-a-crown, while the flowers are about the size of a shilling. The smallness and sturdy nature of the plant recommend it for cultivation in those small window aquaria for which appropriate plants are often sought in vain.

— THE *Irish Farmer's Gazette* calls to our recollection the once familiar DWARF DOUBLE CRIMSON SWEET WILLIAM, an old-fashioned garden favourite, not to be met with in every garden. It is a compact and pretty double crimson form which appears to be specially deserving of being grown. Scarcely raised more than a couple of inches above the soil, its heads of dark maroon, closely packed rosettes form a dwarf, compact, and glowing surface of colour that is very striking. It is very effective in border patches, but, doubtless, would be more so if massed. It is said to grow freely from slips. We should like to get hold of it.

— Two splendid plants of the NECKLACE ORCHID, *Renanthera* (olim *Vanda*) *Lowii*, were exhibited by Sir Trevor Lawrence, Bart., at South Kensington, July 24. The plants were from 2—3 feet high, perfect in foliage, and bearing one six and the other four spikes of flowers, the longest of which measured nearly seven feet.

In Memoriam.

— M. CHARPENTIER, head gardener at the Trianon Palace, Versailles, and the father of French gardeners, died recently at the advanced age of eighty-seven years. He is described as the oldest of French gardeners, and as a hale, energetic man, who died in harness.





PHACELIA CAMPANULARIA.

[PLATE 595.]

WE received the specimens from which our figure of this charming new annual was prepared, from Mr. W.

Thompson, of Ipswich, by whom it was introduced from California, where it has been found in the counties of San Diego, and San Bernardino. It is a dwarfish plant branching from the base, in its wild state growing about six inches high, the branches stoutish, and bearing stalked subcordate irregularly dentate leaves, and scorpioid racemes of bell-shaped flowers of the richest gentian blue, having a greyish throat marked by five oblong white blotches; the lobes of the limb are broad rounded and spreading, and the anthers projecting beyond the tube of the corolla. Some idea of its beauty may be formed from the fact that it has won from the Royal Horticultural Society's Floral Committee—a body not too much addicted to the

encouragement of annuals—the award of a First-class Certificate.

The plant bears a certain degree of resemblance to the old *Whitlavia grandiflora*, now called *Phacelia Whitlavia*, but is altogether different in the splendid blue colour of its blossoms, which is fully as intense as in the smaller-flowered *Eutoca viscidula* now *Phacelia viscidula*. The experience one has had with these old favourites is suggestive that in its successful cultivation the new-comer must have a dryish, that is, a thoroughly well-drained soil of a free open pervious texture, and it will probably be found that manures must be used with great caution so as to avoid too sappy and succulent a development of the branches. The name *Phacelia campanularia* was given by Dr. Asa Gray, and is that adopted by Mr. Sereno Watson in the *Botany of California* (ii. 467).—T. M.

BEDDING *versus* HERBACEOUS PLANTS.

IT is not unusual now-a-days to read in some of the gardening periodicals paragraphs disparaging all kinds of Bedding, including the Ornamental Planting generally in use in our Flower Gardens, and eulogising the 'much-neglected' herbaceous plants as they are termed. If, however, we carefully examine the question, we shall find that both are necessary in their proper positions, and that the one could not, without great disadvantage, be substituted for the other. For instance, who would venture to place herbaceous plants in a well designed flower garden on a terrace, on grass in front of the drawing-room windows, or in close proximity to the house? Their brief season of flowering, their inequality of growth, the different periods in which they produce their flowers, and the untidy appearance of the plants as soon as the flowering season is over, however carefully they may have been selected, would render them quite unfit for any such positions.

Many gardeners of the present day can well remember the old flower gardens which were in existence previous to the introduction of the so-called bedding plants, and their unsatisfactory condition before the summer was half over. The flower gardens of those days

were mostly placed in some sheltered spot on the Lawn, and far away from the house; or if near, they were hid away from the windows by a belt of evergreen shrubs—no doubt on account of the difficulty of keeping them in an interesting condition. I well remember filling up ugly gaps with greenhouse *Pelargoniums*—there were not many scarlets in those days—and the best kinds of Annuals, but with all these adjuncts they made a very sorry appearance in comparison to the flower gardens of the present day, which can be kept in perfection until they are destroyed by frost.

Herbaceous plants are most interesting when a good selection is made, and a proper position assigned to them, but they are totally unfit for geometrical flower gardens. If, however, they are planted in front of shrubs, and kept beyond their influence in a well prepared border on the skirts of the lawn, they look very well, and many of them are very useful for furnishing cut flowers for the use of the house; but I would prefer making the herbaceous borders in the kitchen garden, especially if the latter is in close proximity to the house, as by taking the borders on each side of the central walk an ornamental appearance is given to the garden, which creates a favourable impression

and attracts the notice of visitors on entering it. These borders might be made of sufficient breadth to supply the requirements of the house, and filled in, in addition to the herbaceous plants, with Roses, Dahlias, the best kinds of Annuals, and in fact any interesting or useful plants not suited to the dressed garden. Any quantity of flowers may be taken from these borders for the supply of the house, thereby avoiding the necessity of stripping the beds in the flower garden proper, where all should be kept gay and in the very best condition.

The present plan of bedding was not arrived at without meeting with much opposition on the part of those who were wedded to the old system. Mixed beds of flowers were tried before the custom of planting a whole bed with one kind was adopted. I believe the late Mr. Caie, when gardener at Campden House, Kensington, was one of the first, if not the first gardener to plant an entire bed of one kind of scarlet *Pelargonium*, and he felt much

interested in the questions, What would be thought of it? and, What would be its result? We can well recollect the interest awakened when the late Mr. G. Fleming, of Trentham, introduced what he termed his system of ribbon borders, what an amount of enthusiasm was created by it, and how soon it revolutionised the treatment of flower garden decoration throughout the country.

This system has gone on improving ever since, until our flower gardens have become real works of art, and a pleasure to look upon for the whole of the summer and autumn. No doubt the carpet bedding in our parks and public gardens, as well as in many private gardens when the necessary time can be bestowed upon its proper keeping, is as near perfection as can well be. Indeed, I think it very doubtful whether the next generation of horticulturists will witness such a startling revolution, or see such a marked improvement in flower garden decoration as the last has done.—GEO. EYLES, *Kew*.

THE ROSERY AT ERIDGE CASTLE.

WHO does not love the Rose? Of all flowers it is unquestionably the Queen. Its colour, form, and fragrance render it an universal favourite, alike acceptable at the festive board and at the house of mourning.

Some ten years ago I obtained permission to make a Rosery here. The spot chosen was one sheltered from high winds, and yet fully exposed to the sun, two points which are indispensably necessary. I need hardly say that it is on grass, because all Roses, seeing that their colours are so bright, look best on turf. As it is universally admired I thought a sketch of it might be interesting to the readers of the *FLORIST AND POMOLOGIST*, and therefore I send you the plan. I may mention that here it covers half an acre, but it can be laid out to half that size, and still look well.

I perhaps ought to mention that in our case there is in the centre bed an iron pillar 14 feet high, and at the edge of the bed there are eight iron stakes half that height, and from these to the centre chains for training Roses on are hung in festoons. I ought also to mention that the centre bed and the outer border are planted with mixed kinds, while all

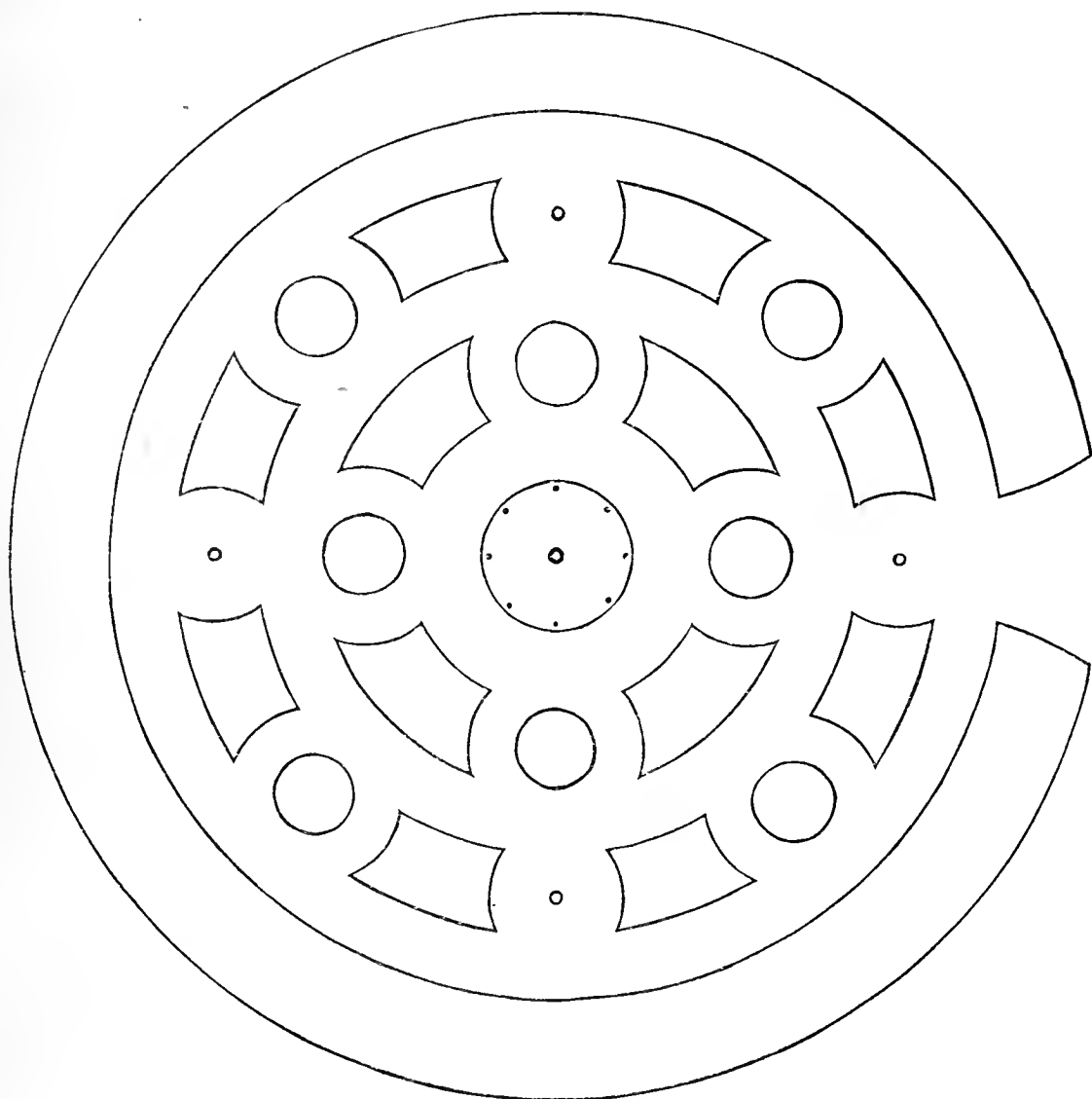
the remaining twenty beds are self-coloured, *i.e.*, each bed is occupied by one kind only.

So far as my experience in forming a Rosery goes, the first condition necessary is to thoroughly drain every bed to the depth of 3 feet; then see that there is 2 feet deep of rich soil in each bed. A stiff loam suits the Rose best, but it will accommodate itself to most soils—peat or moorish soils excepted—if they are made rich by plenty of manure. In forming the beds care is necessary not to have the surface too low or they will form mud pits during winter; nor to have it cocked up too high, for then they will be baked by the summer's sun, to the great injury of the plants. They should simply be kept above the level of the grass.

I consider the best time to plant is the first or second week in November, and prefer dwarf plants, as being less exposed to high winds in summer, and severe frosts in winter. Plants are now offered on their own roots, and on the briar, and the Manetti stocks; if the soil is light they will grow on the latter and do well, but if the soil is stiff I prefer the briar, and if a friable loam they are best on their own roots. Tea Roses, in my opinion,

are best on a wall, or in pots ; therefore the twenty kinds which I shall recommend are principally Hybrid Perpetuals, and they are such as have done well here :—John Hopper, Baroness Rothschild, Gloire de Dijon, Boule de Neige, Perle des Blanches, Duke of Edinburgh, Annie Wood, Maréchal Vaillant,

The plants should be put in at 2 feet apart, and when the planting is completed about six inches of long stable litter, or half the quantity of farm-yard manure, should be laid over the surface of the beds to keep out the frost till next March, when at pruning time that which is rotten can be dug in.



THE ROSE GARDEN AT ERIDGE CASTLE.

Senateur Vaisse, Charles Lefebvre, Marie Baumann, Harrison Weir, Alfred Colomb, Crimson Bedder, Madame Lacharme, Reynolds Hole, Jules Margottin, Fisher Holmes, Madame Victor Verdier, and General Jacqueminot. These are all excellent kinds, and will not disappoint any one.

A Rosery should not be made too near to the mansion, because although in summer no garden can compare to it in beauty, still in winter it is uninteresting. It is best surrounded by evergreens, which afford shelter, and form a fitting frame to the living picture. —J. RUST, *Eridge Castle, Tunbridge Wells*.

MULCHING FRUIT-TREES, &c.

IT is an established fact that the practice of mulching fruits, flowers, and vegetables is one of primary importance, and is always attended with the best results. For many years I have adopted the practice of covering the mulching with a few inches of

clean soil, and the advantage is always apparent, since it causes the mulching to retain its manurial properties as well as secures an orderly and neat appearance, which is of some importance in a well-appointed place. Mulching in the ordinary way often becomes a positive

evil during dry and hot summers; the manure which may have been moist and otherwise suitable for its purpose when applied often becomes a mass of dry inert litter which throws off rain when it should go directly to the roots of the plants; but when covered with soil it gradually decays, retains its virtues, and induces the roots of plants to grow near to the surface. During last November and December we moved a large number of trees, fruit bushes, and also roses to more suitable positions. Most of them were of great age, but they have not only carried full crops of fruit but made growth of great vigour; and though no watering has been done during the past unusually dry season, the roots are moist, fresh, and vigorous, immediately under the well-rotted mulching. Numerous experiments with deciduous forest trees, coniferæ, evergreen shrubs, &c., have long since convinced me that mulching is of great advantage, but the benefit is much greater when the manure is covered with soil.—M. TEMPLE.

ADA AURANTIACA.

WE have in this, the only known species of *Ada*, a well-marked decorative plant of no mean order, and one which is found most useful in our Orchid houses. It is an evergreen dwarfish epiphyte, of a remarkably free habit of growth; indeed, we have had specimens in the Victoria Nursery bearing as many as twenty of its graceful and brilliantly-coloured spikes of flowers. The flower spikes appear with the leaves on the young growths during the winter and spring months. The racemes are drooping towards their extremity, and the flowers of a brilliant orange-scarlet, which is very striking and effective.

When successfully cultivated no one could fail to admire the *Ada aurantiaca*, the more so as it is one of the Orchids which thrive in a cool house, and plants are by no means costly. The flowers last for several weeks in perfection.

The species is a native of the Andes of Colombia, where it is found at the great elevation of 8,000 feet, consequently it will grow well with *Odontoglossums* under cool treatment. Some years ago it was very rare, but it is

now, thanks to our collectors, more plentiful, and more popular. It is a most important decorative plant; indeed we have no colour like it among our cool Orchids, and when brought into association with the delicate colours of *O. Alexandra* and *O. Pescatorei* the effect obtained by the intermixture is altogether charming. There is a good figure published in the *Orchid Album*.

The *Ada* requires the same treatment as the *Odontoglossums* just referred to. The potting material best suited to its growth is a good fibrous peat, with plenty of drainage. It will thrive either in a pot or in a basket. In potting it should be well elevated above the rim, so that the roots can work freely among the material in which it is potted. The soil should be kept moist during the growing season, but on no account must the moisture be allowed to become stagnant, a condition which can be prevented by using charcoal mixed with the peat, which will keep the drainage open, and allow the waste water to pass off. If the soil should by any mischance become soddened it must be removed and fresh soil made use of, the roots being well washed previously to repotting.

Shade is very essential to the well-being of the foliage, as the leaves are apt to go spotted if the sun is permitted to shine strongly upon them. In its native country it is found in shady places, and hence it will not bear full exposure, though in its artificial home it needs all the light that can be given to it.—B. S. WILLIAMS, *Victoria Nursery, Upper Holloway*.

DYSON'S STOCK.

UNDER this name in May last I saw growing in Mr. Samuel Barlow's garden at Stake Hill a very fine large-flowered Crimson Stock of great beauty and brilliant in colour. This is a local name given to it, but I fancy it is identical with the new Giant Crimson ten-week, known to growers in the South. It throws up magnificent spikes of double flowers, and, indeed, a considerable proportion of the plants are double. Mr. Barlow sows the seed early in the year, and grows on his first batch of flowering plants in pots, and when I saw them they were beginning to bloom in his cold house. A later sowing is made for bedding

out in the flower garden. But it is not a branching Stock, which detracts somewhat from its beauty.

In the same house was a batch of fine plants of Stock Mauve Beauty, also in pots, and just coming into flower. This is an admirable variety for pot culture because it has such a desirable pyramidal branching habit, and in addition to a very fine and dense centre spike, throws out also a number of side branches, each of which carries some admirable flowers. This also is bedded out, and now the beds are in their full beauty, and Mr. Barlow states they last nearly all through the summer.

I think gardeners do not so readily appreciate the value of Stocks as pot plants as they ought. It may perhaps be said that there is an abundance of pot plants during the summer months, and why bother about Stocks; but some change is desirable, and the Stock will be found to yield a great amount of pleasure, and be at the same time of decided decorative value.—R. DEAN.

NOTES ON CROSS-BREEDING.

I SEND you some notes of my experiments on crossing plants, though I am afraid that anything I can say on this subject will be of but little interest to your readers. It is, however, a subject which I have very much at heart, and I should be pleased if I could write anything that would induce any enterprising individuals to embark in the pursuit of producing improved varieties of Flowers, Vegetables, or Fruits.

About 1855 I commenced growing *Verbenas* with a view to producing new kinds, and by steadily and carefully selecting for seeding the finest flowers, that is, flowers possessing the best properties, a steady improvement was the result, and eventually many fine varieties were produced. The success that attended my efforts with the *Verbena* induced me to take up the *Pelargonium*. At first I tried selection only, saving seed from the best varieties in cultivation; but finding that by this method progress was very slow, I began to see the necessity for using the brush, and exercising more care in selecting the kinds to be operated upon.

At this stage I adopted a mode which was attended with good results, namely, that of

selecting as female parents kinds of good habit, and possessing all the required properties in the flower in the greatest degree. These were kept by themselves, the natural anthers removed, and the flowers, when arrived at a proper receptive state, were fertilised with pollen from all the most desirable sorts in the collection. The influence of the female parent was evident on the progeny, especially as regards the habit of the plant; and in this way many fine kinds were raised. I then turned my attention to the Ivy-leaved section, with a view to obtain a scarlet-flowered variety with the trailing habit of the Ivy-leaf, using the old white Ivy-leaf variety as the female parent, to which pollen from one of the best of the scarlet section was applied. This was attended with some difficulty, but at length I succeeded in setting a flower and ripening seeds, from which was raised the hybrid Ivy-leaved *Pelargonium*, *Lady Edith*. I believe this was the first hybrid of this kind, for although it was not shown till the year that *Willsii rosea* was shown, it was raised three or four years previous, and it was certificated by the Royal Horticultural Floral Committee in September, 1869, and sent out by Mr. Keynes, of Salisbury, the following year. The reason I did not continue my experiments with the Ivy-leaved *Pelargoniums* was, that *Lady Edith* never bore either pollen or seed, being perfectly sterile.

At this time I was busily occupied with the improvement of the *Dahlia*, and although I did not at that time artificially fertilise the *Dahlia*, I have since done so, and find it quite practicable, and in raising Single Dahlias it would, I feel convinced, be attended with success. I have not yet tried my hand at these latter, but since I saw the beautiful stand shown by Mr. Turner at the Crystal Palace, I have had a longing desire to possess a few good ones to operate upon.

I have lately paid some attention to *Fuchsias*, and although I have frequently endeavoured to cross the different species with the ordinary garden kinds my efforts have not been attended with much success. A rather extraordinary incident in this way occurred, which may be worth recording. The object being to obtain a yellow *Fuchsia* if possible, *Aurora* and *Lord Beaconsfield* were selected

as female parents, the latter being, I believe, a cross from *F. serratifolia*. To these pollen of all the best Fuchsias in our collection was applied, and a nice lot of seed secured, from which a good batch of plants was raised. These as they came into the rough leaf presented the appearance of one of the species, and curiosity was excited by the singular appearance of their foliage; gradually they assumed the character of a well-defined form of *F. corymbiflora*, but being confident of the cross we looked forward to their blooming with great interest. To our great disappointment every one of them proved what they appeared to be, namely, *corymbiflora*. I have not been able to account for this. Another singular feature in this matter is that not a trace of the two kinds, Aurora and Beaconsfield, was apparent in any of the seedlings except one, and this, in my opinion, will prove a valuable addition to our cultivated Fuchsias. I exhibited a small plant of this at South Kensington on July 24th, 1883, under the name of *Rubra magnifica*; it is a fine self-coloured flower, which in its pointed sepals and rather close corolla somewhat resembles Beaconsfield.

Sweet Peas and Culinary Peas, if admissible to the FLORIST [Yes], must form the subject of another paper.—HENRY ECKFORD, Boreatton Park, Baschurch, Salop.

GRAND NATIONAL DAHLIA SHOW.

A SECOND time the growers of the Dahlia have rallied round the Queen of Autumn flowers, and with the aid afforded by the authorities of the Crystal Palace have held an exhibition worthy of the name. The season had not been quite propitious, and it was feared there would be a falling off in the quantity if not of the quality of the flowers exhibited. This however was not the case, for though some classes were not so full, the display generally was equal to that of last year, though the date fixed to suit the arrangements at the Palace was rather too early for the northern growers; moreover, the finish of the blooms was all that could be desired, there being but few traces of coarseness. It has been remarked, that, taking the exhibition as a whole, it was very encouraging to the promoters, and, no doubt, it would be

a great pity were this annual display to fail for lack of adequate support.

The increased interest of a Dahlia Show now that all classes of the flower are admitted to competition is a point worthy of note, for though the massive symmetry and brilliancy of the best show and fancy varieties rivetted the gaze of crowds of visitors, the pompons and the singles, especially as so effectively set up by Mr. Turner, made a charming display. The seedlings were few, except in the single class, in which however there was but little novelty. A stand of grand blooms of the so-called Cactus Dahlia (*D. Juarezii*) from Messrs. Paul & Son, of Cheshunt, was a great source of attraction; and Messrs. Kelway & Son, of Langport, staged a wonderfully fine collection of Gladioli, from amongst which the following were selected to receive 1st-class Certificates:—Sir Stafford Northcote, Duke of Buccleuch, Duchess of Teck, Thomas Moore, and W. E. Gladstone. The show opened on August 31, and was continued on the following day.

NURSERYMEN'S CLASSES.

Class A. 48 show varieties, distinct.—5 collections were staged. The competition for the first place was very keen, but the prize was in the end awarded to Mr. C. Turner, Royal Nurseries, Slough, who staged Lillie Ward, a charming new flower, white with a tinge of pale rose in the centre; James Cocker, Harriett Tetterill, George Barnes, a deep lilac self sport from the fancy variety of this name; Ovid, Hon. Mrs. Percy Wyndham, John Standish, Georgiana, a large white flower slightly tinted with cream, very fine form and substance; Lady Antrobus, J. B. Service, H. W. Ward, James Vick, Prince Bismarck, Ethel Britton, a lovely delicate flower; Muriel, Drake Lewis, Constancy, George Smith, W. H. Williams, Cream of the Valley, Alexander Cramond, James Stephen, Charles Lidgard, Michael Saunders, Royal Queen, Canary, Henry Walton, Champion Rollo, Cardinal, William Rawlings, John Wyatt, Herbert Turner, Clara, Hugh Austin, Cecilia, pale yellow self; Thomas Goodwin, Lizzie Leicester, Rosetta, a fine purple self of 1882; Julia Wyatt, Rev. J. Godday, Pioneer, rich glossy black, probably the darkest Dahlia in cultivation; Lady Gladys Herbert, Lord Chelmsford, J. Neville Keynes, Joseph Green, Bessie, a pleasing lilac self of 1882; Flag of Truce, and Prince of Denmark. 2nd, Messrs. Keynes & Co., Salisbury, with fine blooms of Enchantress, George Barnes, both in rare form; Countess of Ravensworth, James Cocker, Charles Leicester, John Wyatt, Ethel Britton, Mrs. Harris, Vice-President, Royal Queen, Triumphant, Joseph Ashby, James Vick, Canary, Prince Bismarck, J. W. Lord, Professor Fawcett, Henry Walton, Imperial, deep purple, shaded with lilac, new and good; Mrs. S. Hibberd, Mr. Spofforth, Hon. Mrs. P. Wyndham, J. Neville Keynes, W. P. Laird, John Bennett, Hugh Austin, Rebecca, Princess of Prussia, Goldfinder, Seraph, blush, a new variety, and a fine back row flower; Bessie, Duke of Connaught, J. C. Reid, Prince of Denmark,

Harriett Tetterill, Rev. J. B. M. Camm, Rosy Morn, Sir Garnet Wolseley, reddish-chocolate, new of 1882; Rosetta, Miss Cannell, Mrs. John Laing, Harrison Weir, Lord Chelmsford, and seedlings. 3rd, Messrs. Harkness & Sons, Bellerby Grange Nurseries, Yorkshire; 4th, Mr. Henry Clark, florist, Rodley, near Leeds. Messrs. H. Cannell & Sons competed in this class.

Class B. 24 show varieties, distinct.—6 collections, the three first stands very good. 1st, Messrs. Rawlings Bros., florists, Romford, who had George Rawlings, Ethel Britton, Mrs. Harris, J. C. Quennell, Goldfinder, Shirley Hibberd, Clara, James O'Brien, a sport from the fancy variety bearing that name; James Vick, Mrs. S. Hibberd, Joseph Ashby, Harrison Weir, Rev. J. Godday, Emily Edwards, Prince Bismarck, Rev. J. B. M. Camm (sport), Hon. Mrs. P. Wyndham, James Service, Sunbeam, William Dodds, John Bennett, Modesty, H. W. Ward, and J. W. Lord. 2nd, Messrs. Paul & Son, the Old Nurseries, Cheshunt, with George Baines, Admiration, John Wyatt, Royal Queen, Prince Bismarck, Julia Wyatt, General Roberts, Alex. Cramond, M. Saunders, Ethel Britton, Victory, Fred. Smith, W. H. Williams, Leah, James Service, Champion Rollo, Mrs. Harris, Mrs. Dodds, B. Crossland, Hon. Mrs. P. Wyndham, Countess of Pembroke, Prince of Denmark, Adelaide and Joseph Ashby. 3rd, Messrs. J. Saltmarsh & Sons, Chelmsford. 4th, Messrs. J. Cheal & Sons, Crawley, Sussex.

Class C. 12 show varieties, distinct.—6 collections. 1st, Mr. John Walker, Thame, with a nice even lot, consisting of Prince Bismarck, Emily Edwards, a charming light variety, inclined to be over-large in the petal; James Cocker, John Standish, Goldfinder, Alex. Cramond, Duke of Connaught, Hon. Mrs. P. Wyndham, Joseph Green, Prince Arthur, Mrs. S. Hibberd, and James Vick. 2nd, Messrs. Gilbert & Son, Ipswich, with good blooms of Shirley Hibberd, Ethel Britton, William Rawlings, Hon. Mrs. P. Wyndham, Pioneer, Henry Walton, Alexander Cramond, Mrs. Dodds, Flora Wyatt, Mrs. Compton, James Vick, and J. W. Lord. 3rd, Mr. W. Burbury, Crewe Farm, Kenilworth, with Burgundy, J. C. Reid, George Barnes, Alexander Cramond, Vice-President, Joseph Green, Pioneer, Emily Edwards, Fred Rawlings, Hon. Mrs. P. Wyndham, J. B. Ward, and Charles Leicester. 4th, Mr. G. Humphries, Kington Langley.

Class D. 24 fancy varieties, distinct.—5 collections. 1st, Messrs. Keynes & Co. with a very fine lot of flowers, consisting of Rebecca, Gaiety sport, Mandarin, Gaiety, Hugh Austin, Professor Fawcett, Hercules, Mrs. N. Halls, a charming variety, tipped white on a red ground, extra fine form and substance; James O'Brien, George Barnes, Oracle, Mrs. Saunders, Henry Glasscock, John Lamont, Gaiety sport, Flora Wyatt, Madame Soubeyre, rosy-lilac striped with carmine, very pretty; John Forbes, Fanny Sturt, Charles Wyatt, Annie Pritchard, and seedlings. 2nd, Mr. C. Turner, with an excellent lot, consisting of Mrs. N. Halls, Hercules, Fanny Sturt, Duchess of Connaught, Grand Sultan, Rebecca, James O'Brien, Annie Pritchard, Lady Antrobus, Robert Burns, Rev. J. B. M. Camm, Professor Fawcett, Miss Browning, Fred. Smith, John Forbes, Lucy Fawcett, Oracle, Henry Glasscock, John Lamont, Magician, three Gaiety sports, and Jessie McIntosh. 3rd, Mr. H. Clark. 4th, Messrs. H. Cannell & Sons.

Class E. 12 fancy varieties, distinct.—8 collections. 1st, Messrs. Saltmarsh & Sons, with a very good stand, comprising Egyptian Prince, Mrs. Saunders, Peacock, Grand Sultan, Fanny Sturt, Flag of Truce, John Lamont, Gaiety, Mrs. N. Halls, Enterprise, Octoroon, and Fanny Sturt. 2nd, Messrs. Rawlings, with Egyptian Prince, Mrs. Saunders, Barnaby

Rudge, Mrs. N. Halls, Hercules, George Barnes, Galatea, Chorister, Professor Fawcett, John Forbes, Henry Glasscock, and Enchantress. 3rd, Messrs. Paul & Son. 4th, Mr. John Walker.

AMATEURS' CLASSES.

Class F. 24 show varieties, distinct.—4 collections. 1st, Henry Glasscock, Esq., Bishop's Stortford, who had excellent blooms of Prince Bismarck, Joseph Ashby, Mrs. Spofforth, Goldfinder, Emily Edwards, William Rawlings, Earl of Ravensworth, James Cocker, Modesty, Black Knight, Hon. Mrs. P. Wyndham, Cardinal, Alex. Cramond, Countess of Ravensworth, Shirley Hibberd, Ethel Britton, Rev. W. Moffatt, Harrison Weir, Revival, Mrs. Harris, Mary Nisbet, and Georgiana. 2nd, Mr. Joseph Nation, Whitmore, Staple Green, Taunton, with Constancy, Gen. Roberts, Henry Walton, Rev. J. Godday, George Smith, Crown Prince, Major Cornwallis West, Hugh Miller, Lord Chelmsford, Mrs. Harris, William Rawlings, Annie Neville, Canary, Shirley Hibberd, J. W. Lord, Royal Queen, Prince Bismarck, Goldfinder, Artist, Criterion, Yellow Boy, Chris. Ridley, James Service, and Duke of Connaught. 3rd, Mr. R. Petfield, Diddington, Buckden, Huntingdon. 4th, Mr. W. Butterworth, Kidderminster.

Class G. 12 show varieties, distinct.—11 collections. 1st, Mr. J. T. West, gardener to W. Keith, Esq., Cornwalls, Brentwood, with good blooms of J. W. Lord, Ethel Britton, Hugh Austin, George Rawlings, Hon. Mrs. P. Wyndham, Pioneer, Prince Bismarck, Henry Walton, Shirley Hibberd, Mrs. Dodds, Joseph Ashby, and J. C. Quennell. 2nd, Mr. B. Clarke, Shotesham, All Saints, Norfolk, with Henry Walton, Acme of Perfection, George Smith, W. H. Williams, Shirley Hibberd, Emily Edwards, James Cocker, Empress, William Rawlings, Rosy Morn, Prince Bismarck, and Pioneer. 3rd, Mr. J. Tranter, Upper Assenden, Henley-on-Thames. 4th, Mr. M. Godden, Tovil Green, Maidstone.

Class H. 6 show varieties, distinct.—5 collections. 1st, Mr. G. Boothroyde, gardener, Woodville, near Dover, with capital blooms of Alexander Cramond, James Cocker, John Bennett, Constancy, Joseph Ashby, and Thomas Goodwin. 2nd, Mr. T. Masters, Shepherd's Cottage, Penenden Heath, Maidstone, with Chris. Ridley, Goldfinder, James Cocker, Henry Walton, Flora Wyatt, and J. N. Keynes. 3rd, T. C. Shrimpton, Englefield, Reading. 4th, E. Mawley, Esq., Lucknow House, Addiscombe, Croydon.

Class I. 12 fancy varieties, distinct.—5 collections. 1st, Henry Glasscock, Esq., who had charming blooms of George Barnes, Henry Glasscock, Barnaby Rudge, John Forbes, Fanny Sturt, Egyptian Prince, Mrs. N. Halls, Jessie McIntosh, Edward Peck, Miss Browning, Viceroy, and Professor Fawcett. 2nd, Mr. Joseph Nation, with Henry Glasscock, Mrs. Saunders, Gaiety, Richard Dean, Chang, Hugh Austin, Leopardess, Cameo, Chorister, Egyptian Prince, Oracle, and William Ady. 3rd, Mr. R. Petfield. 4th, Mr. J. Ridout, gardener, Woodhatch Lodge, Reigate.

Class K. 6 fancy varieties, distinct.—11 collections. 1st, Mr. J. T. West, with good examples of Hugh Austin, George Barnes, Hercules, John Forbes, Jessie McIntosh, and Oracle. 2nd, Mr. J. Tunbridge, gardener to W. Bott, Esq., Broomfield, Chelmsford, with Enchantress, Miss Browning, Mrs. N. Halls, Fanny Sturt, Flag of Truce, and Gaiety. 3rd, Mr. G. Boothroyde. 4th, James Wigan, Esq., Bishop's Stortford.

OPEN CLASSES.

Class L. The best bloom of any show variety.—The premier show Dahlia was Georgina a white self, slightly tinted with cream, sent out by Messrs.

Keynes & Co. in 1882, and exhibited in Mr. Turner's stand of forty-eight varieties.

Class M. The best bloom of any fancy variety.—The premier fancy Dahlia was George Barnes, in Messrs. Rawlings Bros.' stand of twelve fancies; this also was distributed by Messrs. Keynes & Co. a few years since.

Class N. 24 Pompon varieties, distinct.—4 collections. 1st, Mr. C. Turner, whose stand, an exhibition in itself, consisted of Wilhelm Nitsche, Gruss ans Wien, White Aster, Gem, intense scarlet, new and fine; Professor Bergeat, Comtesse von Sternberg, Adonis, Favourite, dark maroon, edged with crimson; North Light, Little Duchess, Titania, Mabel, lilac, very pretty; Lady Blanche, Prince of Liliputians, Mdle. Valentine Faconet, Nympha, Garnet, orange-scarlet; Fair Helen, Isabel, Hedwig Polwig, Little Arthur, The Khedive, deep crimson, suffused with white at the base; and E. F. Jungker. 2nd, Messrs. Keynes & Co., with capital examples of Lady Blanche, Sappho, E. F. Jungker, Hebe, Garnet, Royalty, Pure Love, Ronstapand, Peasant Fire, Gem, Fanny Weinart, Mont Blanc, Nemesis, Hedwig Polwig, Little Dear, Mdle. V. Faconet, Isabel, Darkness, Rosetta, White Aster, Flora McDonald, and Favourite. 3rd, Messrs. H. Cannell & Sons.

Class O. 12 Pompon varieties, distinct.—6 collections. 1st, Messrs. Paul & Son, who had charming bunches of Butterfly, A. Hubner, Little Mabel, Little Nigger, White Aster, Pure Love, Fanny Weinart, Dr. Webb, Dora, Forstmeister, Dove, and Nemesis. 2nd, Messrs. J. Gilbert & Son, with Guiding Star, Handelsgartner, Sensation, Pure Love, Rogier Chauvière, Lady Blanche, Dove, H. Milesky, Little Mabel, Fair Helen, Little Nigger, and one unnamed. 3rd, Mr. John Henshaw, Harpenden, St. Albans. 4th, Messrs. F. T. Smith & Co., West Dulwich.

Class P. 6 Pompon varieties, distinct.—2 collections. 1st, Mr. J. T. West, with Little Dear, Sensation, Dr. Rauch, J. E. O. Enke, Little Ellen, and Dove. 2nd, Mr. J. Tunbridge.

Class Q. 12 single varieties, distinct.—6 collections. 1st, Mr. C. Turner, with splendid examples of the following, shown in finely arranged bunches:—Mauve Queen, Alba, Rob Roy, Yellow Gem, Gracilis elegans, Purity, Duke of Teck, Beauty of Cambridge, Highland Chief, Firefly, Paragon, and Beatrice. 2nd, Messrs. Keynes & Co., with Avalanche, Red Gauntlet, Althea, Paragon, Picturata, Acquisition, Evening Star, Vesuvius, Bertha, Yellow Queen, White Queen, and Defiance. 3rd, Messrs. Paul & Son. 4th, Messrs. H. Cannell & Sons.

Class R. 6 single varieties, distinct.—10 collections. 1st, Mr. G. Humphries, Kington Langley, Chippenham, with charming bunches of Bountiful, Perfecta, Beauty, Golden Star, Picta, and White Queen. 2nd, Messrs. J. Gilbert & Son, with White Queen, Scarlet, Defiance, Sir Garnet Wolseley, George Clark, Mauve Queen, and Halo. 3rd, Mr. John Walker, with Nora, White Queen, Duke of Teck, Albatross, Pink Queen, and Amaranth. 4th, Messrs. J. Cheal & Sons.

Seedlings, except in the single class, were few in number. The following Certificates were awarded, but owing to some misconception on the part of the judges that to Messrs. Saltmarsh's single variety was the only one of which the judges handed in a note:—

Mrs. Gladstone: F.C.C., a show variety and a beautiful delicate flower, white, with a tinge of sulphur, and soft fleshy-pink centre, fine

petal outline and centre; from Mr. George Hurst, Enfield Highway.

Duchess of Connaught: F.C.C., a fancy variety, of a pale yellowish-buff, tinged with orange, flaked and striped with rosy-purple, good outline and build, high centre; a sport from James O'Brien; from Mr. C. Turner.

Muriel: pale yellow, the centre slightly suffused with buff, distinct and promising; from Mr. Turner.

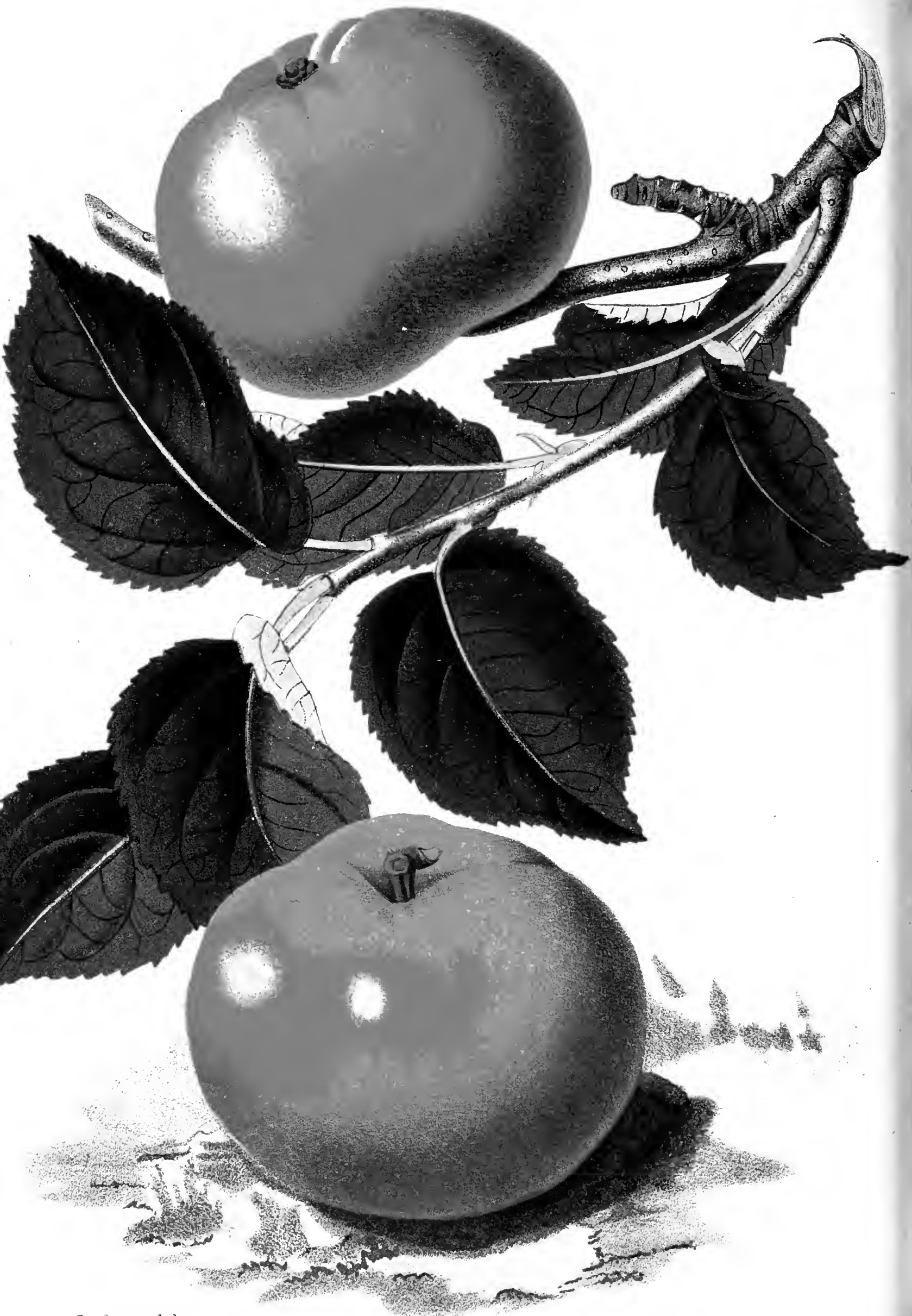
Mrs. Bowman: F.C.C., a single variety, of a magenta-purple, distinct in colour, of fine shape, and very pleasing; from Messrs. J. Saltmarsh & Son, Chelmsford.

A large number of Single Dahlias was also shown by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, who with the addition of a number of named varieties, made a most imposing display, some of his newer forms being very fine. Mr. Turner also showed a very fine new Single White, called *Duchess of Westminster*, which has since proved to be of high merit and received a First-class Certificate.—T. M.

BULB CULTURE.

ONCE more the time for the potting or planting of spring flowering bulbs comes to us, and the autumnal work must be done if we wish to reap the spring harvest of bulb-blossoms. Of one thing I am very certain myself—lover of Orchids that I avowedly am—and it is this: if people would devote the same money and labour to bulb-culture as is ungrudgingly given to Orchids, the result would equal even if it did not exceed that yielded by Orchids themselves. No Orchid surpasses the *Eucharis*, the *Pancratiums*, the Peruvian Daffodil (*Ismene Amancaes*), the drooping *Littonias*, *Gloriosas*, and the graceful *Urceolina*. The *Amaryllis*, Blue Squills, and Golden Daffodils are alike most lovely; indeed a bulb collection well-grown, would be as beautiful all the year round as any collection of Orchids, other things being equal, and such a collection would possess the charm of novelty also.

These plants, like Orchids, are found in all latitudes except the highest, in all temperatures, and under nearly all circumstances—indeed, as we have said, they are as variable, as beautiful; in many cases as rare as Orchids themselves, hence we may be excused if we ask why special houses and special culture is not as



L. Macfarlane del.

Apple Winter Peach

willingly accorded to them as to Orchids, or to Ferns? The "reason why" in this case, however, does not matter so very much after all, but that bulbs generally are neglected in our gardens goes, as I think, without the saying.

Now is the best time to pot half-hardy and hardy bulbs of all kinds for flowering in the greenhouse, and of these I would especially recommend *Narcissus Bulbocodium* (Hooped Petticoat Daffodil), and its large lemon-yellow variety, *N. citrinus*. Then of true Daffodils *N. maximus*, *N. obvallaris* (Tenby Daffodil), *N. Horsfieldii*, *N. princeps*, and others are well worthy of pot-culture, for although they are quite hardy in the open air, they flower earlier in the greenhouse, and their blossoms are all the larger and fairer because defended from rude east winds and the rains of February and March. That Paper White *Narcissus*, and Blue Squills, "Snow Glory" (*Chionodoxa*), and *Crocus*, Roman and other Hyacinths, &c., will be grown in all good gardens is certain, but we wish amateurs and others to extend this list somewhat, and to grow bulbous flowers more generally than they do. The bulbs which every one grows for spring blooming are not more lovely, nor more easily managed than are the *Nerines* or Guernsey Lilies, the vivid scarlet *Vallotas*, and the lovely Belladonna Lilies of autumn, or the *Gladioli* and the Lilies and *Irises* of spring and early summer. There is no reason why the gardener who grows Hyacinths well should not grow *Lachenalias* and *Freesias* and the species of *Zephyranthes* as well.

Hard as it may be to leave the high-road, "the beaten track," we must never forget that there are some lovely by-ways of Bulb culture as yet unexplored. It is a marvel to me that a really comprehensive and well written "Book of Bulbs" has never yet been prepared. But then I must not complain, for as a gentleman said to me the other day, we have no one work as yet compiled of the "Edible Fruits of the World," or of the "Animals, Birds, and Fishes used as Food." Perhaps, after all, we may have "Bulb nurseries" some day in England, and better still, let us hope that amateurs will arise with means and inclination to cultivate all the beautiful bulbous plants they can obtain.

One way to bring about a more general cultivation of bulbs would be the offering of substantial prizes for collections of twelve or twenty-four species at our Horticultural meetings or Flower Shows; and this much we may hope will ere long become a fact, rather than an hoped for innovation.—F. W. B.

WINTER PEACH APPLE.

[PLATE 596.]

THE samples of this valuable and handsome dessert Apple, which formed the originals of our figure, were kindly handed to us by Mr. A. Dean, of Bedford, as illustrations of a really good variety which was not much known. This indeed appears to be the case, as we find but little information concerning it in accessible pomological records. We can bear testimony to its good keeping properties, and also to its excellent quality and pleasant flavour, while the accompanying sketch from Mr. Macfarlane's pencil shows it to be a fruit of a handsome and tempting appearance.

The specimens which came into our hands may be thus described:—*Fruit* full medium size, roundish oblate, slightly ribbed at the apex around the *eye*, which is closed, and set in a broadish shallow basin; *stalk* short, stoutish, set in a small acute hollow. *Skin* yellowish green, speckled on the exposed side mostly towards the base with light red, which here and there changes to light rosy-red in clouded patches. *Flesh* tender, juicy, and sugary, with a very pleasant and agreeable flavour. M. O. Thomas, who calls it *Pêche d'hiver*, states that it is of *première qualité*, which quite coincides with our own observations. It is, in fact, an excellent late dessert Apple in use during the latter part of the winter and in the early spring; and is well deserving of extended cultivation.—T. M.

ANNUAL CHRYSANTHEMUMS.

THE annual varieties of the *Chrysanthemum* are very showy and effective. They are suitable both for beds and mixed borders, and are extremely useful for cut flowers. They are of very easy culture, being hardy, and of robust, free growth, and they require little attention after being sown in April,

beyond thinning out the young plants. They require no staking nor tying, nor watering, when grown in the open border. They will grow and flower freely in almost any garden soil, but the flowers will be larger and finer when they are grown in well-enriched soil. These *Chrysanthemums* ought to be more generally known and more extensively grown, being so showy and so easy of culture.—M. SAUL, *Stourton Castle, Yorkshire*.

TREE CARNATIONS.

THESE are undoubtedly amongst the most useful plants that can be grown, particularly where cut flowers are always in requisition. The true perpetual-flowering varieties are very profuse bloomers, and by judicious management they can be had in flower throughout the year. Not only has this charming class of Carnations become very popular, but great additions have been made to the old varieties, which have also been vastly improved upon. Mr. Turner has recently raised a great number of very fine seedlings, many of which are exceedingly beautiful, of good dwarf habit, and of fine quality; several of them have been exhibited and received First-class Certificates.

Having said thus much about their present status, a few brief practical hints respecting their treatment may be useful. To obtain good-sized strong plants for flowering at the present time, and during the winter months, the cuttings should be struck in January or early in February. Another lot of cuttings should be put in about the end of March. This will give plants of different ages, which will greatly assist in keeping up a succession of blossoms. The cuttings should be potted off as soon as they are rooted into small 60-sized pots, using a compost of two parts good turfy loam, one part old rotten manure, with a little peat and coarse sand. The young plants as soon as they have sufficiently drawn root, should have the hearts pinched out; this will cause them to produce a shoot from every joint. Re-pot them as often as they require it, and supply them sufficiently with water, so as to keep them in a growing state. They should be sheltered under glass till the end of May, when they may be placed out of doors till early in September, after which they should

be put in a cold house, allowed plenty of air, and kept clean from green fly.

Some of the early-struck plants will now be coming into bloom. A little very weak manure water may be used for these, but it is better to make the soil rather rich than to give them too much strong liquid, as this is no doubt the cause of some persons losing so many plants. As the number of varieties now is rather considerable, I shall confine my list to a few of the very best:—

RUFUS: rich scarlet, very bright, large full fine-formed flower.

JULIETTE: deep rose, fine smooth petal, large full flower, good habit.

CONQUEROR: salmon rose, slightly striped with purple; large full and distinct.

FIELD MARSHAL: deep scarlet, large full finely-shaped flower, good dwarf habit.

EGYPTIAN: dark maroon, large and full, very fine.

MRS. LLEWELYN: bright rose, large full finely-formed flower, and good dwarf habit.

DUKE OF ALBANY: deep rich scarlet, large full and of fine form.

FIRE KING: pale yellow ground with heavy scarlet edge.

PREMIER: bright crimson, large and full, good dwarf habit.

BURGUNDY: dark maroon, large and very free.

ENCHANTRESS: deep pink flaked with dark purple, large and good.

WHIPPER-IN: scarlet, with very dark stripes, large full flower, very profuse blooming, good robust habit.

FLAMBEAU: buff ground heavily edged with deep red, large and full.

RUBY: crimson purple, large full flower, quite distinct.

SERAPH: a beautiful deep rose, large and moderately full, good dwarf habit.

Yellow perennials are the most scarce. MRS. GEORGE HAWTREY is the brightest and the best; ANDALUSIA is larger, but pale and very serrated. Good Whites are also scarce; in this class, THE QUEEN, which is the best, is very fine; L'HERMINE is very good, but not of good habit; LA BELLE, although an old variety, should still be grown; GLOIRE DE NANCY (or White Malmaison) is a fine large full flower, pure white and very sweet scented, but is not really a perpetual flowering variety.—J. BALL, *Slough*.

ADIANTUM DOLABRIFORME.

FOR many years this Brazilian fern was mixed up by scientific pteridologists with the old *Adiantum lunulatum*. It is, however, essentially distinct, being of strictly evergreen habit and continuous in growth, while the latter is deciduous, dying off

and resting in winter. *A. lunulatum* has always been a scarce fern, and the cause has doubtless been, that in many instances this habit of resting has been mistaken for death, and the roots have been thrown away without

distinctly lunulate outline. The fronds are elongated, drooping, and freely proliferous at the end of the rachis; they are pinnately divided, and the pinnæ are dolabriform or hatchet-shaped, shortly petiolate, membrana-



ADIANTUM DOLABRIFORME.

examination. *A. dolabriforme*, the annexed illustration of which we owe to Mr. B. S. Williams, of Holloway, is moreover a more slender plant than the ordinary form of its ally, which has the pinnules larger and of a

ceous, having the upper margin arched and lobulate. The small marginal lobules bear oblong sori.

It is a most elegant stove fern, especially adapted for basket culture, and when well

developed has an interesting as well as ornamental aspect, from the presence of the young plants which grow from the tips of the older fronds, and often repeat themselves, so that the mother plant becomes a colony of young ones. By taking advantage of this habit it may be increased with facility.—T. MOORE.

INTERNATIONAL POTATO EXHIBITION.

THE ninth Annual International Potato Show was held at the Crystal Palace, on September 13 and 14, and proved to be a thorough success, both in regard to its extent and the quality of the exhibits. The premier prize for 24 varieties was won by Mr. H. E. Gribble, Maidenhead, with a beautiful collection remarkable for the evenness and moderate size, and the symmetry and clearness of the examples it contained, which comprised Fillbasket, Early Regent, International, Magnum Bonum, Woodstock Kidney, Cosmopolitan, King of Potatos, Porter's Excelsior, Reading Hero, Bedfont Prolific, Covent Garden Perfection, and Schoolmaster—whites; and Beauty of Kent, American Purple, Mr. Bresee, Reading Russet, Heather Bell, Improved Peachblow, Extra Early Vermont, Prizetaker, Vicar of Laleham, Matchless, Adirondack, and Beauty of Hebron—coloured varieties.

In the class for 18 varieties for gardeners only, Mr. Hughes, of Eydon Hall, Byfield, was 1st, with a splendid lot, containing fine samples of Woodstock Kidney, Snowdrop, Jackson's Kidney, Myatt's Ashleaf, Edgcote Seedling, Lady Truscott, White Emperor, Porter's Excelsior, and Fillbasket, of white kinds; and Adirondack, Vicar of Laleham, Reading Russet, Mr. Bresee, Radstock Beauty, Queen of the Valley, Beauty of Hebron, Red Fluke, and Prizetaker, of coloured kinds. There were also classes for 12, for 9, and for 6 varieties, and for the largest handsome tubers of 4 varieties—size and beauty of sample combined.

An interesting series was furnished by the classes for 3 sorts respectively of white rounds, coloured rounds, white kidneys, and coloured kidneys. For white rounds, Mr. R. Dean was 1st, with Schoolmaster, First and Best, and Early Bird. For coloured rounds, Mr. R.

Dean was again 1st, with Vicar of Laleham, Radstock Beauty, and Reading Russet. For white kidneys, Mr. J. Pickworth was 1st, with International, Woodstock Kidney, and Royal Ashleaf. For coloured kidneys, Mr. R. Dean was 1st, with Mr. Bresee, Prizetaker, and Bountiful. The samples in all these cases were as nearly perfect as could be.

The single dishes of varieties of English origin also made an interesting series of exhibits. In white rounds Mr. Kerr was 1st with Schoolmaster, Mr. McKinlay 2nd with White Emperor, and Mr. Turner 3rd with Schoolmaster. In coloured rounds Mr. Creed was 1st with Reading Russet, Mr. McKinlay 2nd with the same, and Mr. Pragnell 3rd with Redskin Flourball. In white kidneys, Mr. Pearson, Chilwell, was 1st with Sanday's Seedling, very handsome, Mr. West 2nd with Magnum Bonum, and Mr. Kerr 3rd with International. In coloured kidneys Mr. Kerr was 1st with Defiance, Mr. Follows 2nd with Prizetaker, and Mr. Pickworth 3rd with Prizetaker.

The best New Potatos put into commerce in 1883, as here determined, were the following:—Of White varieties, Lady Truscott, one of Mr. Fenn's fine sorts, shown by Mr. McKinlay, the 2nd prize going to the same variety, shown by Mr. J. Allen, and the 3rd to Alderman, a flat sort, shown by Mr. R. Dean. Of coloured varieties, The Belle, a round variety much like Queen of the Valley, shown by Mr. Hills, was 1st; Sir Garnet Wolseley, from Mr. Kerr, 2nd, and Red Lion, from Mr. Butt, 3rd.

Seedling Potatos not in commerce, were required to have been grown at Chiswick for trial and comparison during the past summer. The following were those selected for reward:—

WHITE KIDNEYS.—Prize and F.C.C. to *Welford Park Kidney*, a handsome sort, of which the parentage was not stated, from Mr. C. Ross; it is large longish and cylindrical, smooth, with a clear white skin, and a good exhibition sort. F.C.C. to *Midsummer Kidney*, a first-early, roundish at the ends, and of first-rate table quality; a seedling of great size from Success crossed with Woodstock Kidney; from Mr. R. Dean. F.C.C. to *Hughes' Prolific*, a variety in the style of Snowflake, handsome, heavy cropping, and of fine quality; a cross between Beauty of Hebron and Myatt's

Ashleaf; also to *Beauty of Eydon*, raised from the same cross; it is of the Lapstone type with roundish handsome tubers; considered the best flavoured potato of the season; both from Mr. Hughes, Eydon Hall.

COLOURED KIDNEYS.—Prize and F.C.C. to *Edgcote Purple*, a singularly handsome and very distinct variety, whose parentage was not stated, from Mr. Wells, Banbury; the tubers are long, cylindrical, and very smooth. F.C.C. to *Cardinal*, raised between Early Rose and Bountiful, a handsome, large, heavy cropping, bright red second early, of very fine quality, from Mr. R. Dean.

WHITE ROUNDS.—Prize and F.C.C. to *Prime Minister*, raised from Magnum Bonum crossed with Woodstock Kidney, a splendid large flat round tuber, very white and handsome, a heavy cropper, of excellent table quality; from Mr. R. Dean.

COLOURED ROUNDS.—Prize and F.C.C. to *The Dean*, a seedling from Vicar of Laleham crossed with Woodstock Kidney, a handsome large deep purple of the finest quality; from Mr. R. Dean.

The show was opened by Mr. Alderman and Sheriff de Keyser, representing the Lord Mayor, who was unavoidably absent, and shortly afterwards a party of assembled visitors, including several ladies and City officials in full costume, proceeded to the banquet hall, where a splendid luncheon was served to about eighty persons, including not a few of the fair sex. Alderman de Keyser presided at the entertainment, the Vice-Chairs being filled by Messrs. Peter McKinlay and Shirley Hibberd.—T. M.

REGISTER OF NOVELTIES.

NEW PLANTS.

COTYLEDON EDULIS, *Brewer* (*Gard. Chron.*, N.S., xx., 172).—A distinct and remarkable plant, with very short thick stems, furnished with nearly terete or obtusely subtrigonus leaves which stand erect, and are of a whitish or glaucous green colour, but without mealiness, and bearing the flowers in cymose panicles; they are shortly pedicellate, arranged along the upper side of the flexuose spreading branches, white, sedum-like 6—7 lines in diameter with acute spreading segments; found in California on dry banks near the sea in San Diego. It is the *Sedum edulis* of Nuttall, a name which appears to have been given because the young leaves are eaten by the Indians; Kew.

CRINUM HILDEBRANDTII, *Vatke* (*Bot. Mag.*, t. 6709).—A well-marked and handsome Amaryllidaceous stove bulb, with ovoid long-necked bulbs, furnished with 8—10 lanceolate bright green leaves contemporary with the flowers, and producing slender two-edged scapes about a foot high, bearing an umbel of 6—10 flowers, which have a slender perianth tube 6—7 inches long, and a pure white limb of six lanceolate segments 2—3 inches long and spreading horizontally. The filaments are bright purple,

shorter than the segments of the flower. Native of the Comoro Islands; sent to Kew by Sir John Kirk.

DAVALLIA BRACHYCARPA, *Mettenius*.—A charming evergreen warm greenhouse fern, with much the aspect of an *Asplenium*, to which genus it is referred by Kuhn. It has large arching fronds of a lively green colour, and moderately firm texture, with a broad ovate lamina, which is divided in a quadripinnatisect manner, the pinnae six inches long ovate-lanceolate, the ultimate segments cuneate trifid or bifid bluntish, the fertile ones falcate, bearing a solitary sorus on the inner side. The sori are oblique oblong with a pallid membranaceous indusium; 1st-class Certificate R.H.S., July 10; New Hebrides; Veitch & Sons.

ONCIDIUM NIGRATUM, *Lindl.* (*Gard. Chron.*, N.S., xix., 790).—A rare and interesting epiphyte, about which some confusion has arisen. It has pear-shaped ancipitous shining green diphyllous pseudobulbs 4—5 inches long, the leaves ligulate parchment-like in texture, and the flowers in branched panicles with linear-lanceolate much undulated sepals and petals, which are white with a few blackish-purple blotches, and a rather broad blunt triangular lip obscurely three-lobed, with an emarginate sinus, pale yellowish with light cinnamon spots, and a thick saddle-like callus on the disk with two serrated ribs on each side. The column is white with dark blotches, and furnished with four wings of which the lower pair are largest. From Demarara, introduced by Messrs. Loddiges but lost, and re-introduced to the Royal Exotic Nursery, Chelsea; 1st-class Certificate R.H.S., July 10; Veitch & Sons.

PARRYA NUDICAULIS, *Regel* (*Gartenflora*, t. 1126).—A neat hardy herbaceous perennial from Central Asia and North America, growing about six inches in height, with a tuft of lanceolate rather fleshy petiolate radical leaves, and corymbose racemes of comparatively large pale purple or lilac cruciferous flowers having broad obcordate petals over half an inch in length. The plant is allied to *Arabis* and *Hesperis*, and has been called *Neurolooma arabidiflorum*; it was introduced many years ago to our gardens, but seems to have gone out of cultivation until re-introduced by M. A. Regel; St. Petersburg Botanic Garden.

PLAGIOLIRION HORSMANI, *Baker* (*Gard. Chron.*, N.S., xx., 38).—The representative of a new genus of Amaryllids allied to *Eucharis*. The bulbs are ovoid, and the leaves, which are not produced till after the flowers, have a large oblong bright green lamina marked by numerous distinct parallel veins. The scape is shortish bearing in July an umbel of 10—12 smallish scentless white flowers, the perianth under an inch long, with a green cylindrical tube half as long as the six lanceolate segments, of which when fully expanded four are ascending and two spread horizontally; the stamens are declinate; from Colombia; F. Horsman & Co.

PRIMULA SUFFRUTESCENS, *Gray* (*Proc. Amer. Acad.*, vii., 371; *Gard. Chron.*, N.S., xx., 40).—A very pretty Californian Primrose, with long straggling subwoody stems, narrow wedge-spathulate leaves, 1½—2 inches long, dentate at the apex, and terete smooth peduncles about 6 inches high, bearing an umbel of 3—7 funnel-shaped rich rosy-purple yellow-eyed flowers measuring nearly an inch across the limb, which consists of obcordate segments. The thick rooted rootstocks are very peculiar; requiring gritty soil and probably the shelter of a frame; California, on exposed rocks of the Sierra Nevada at 9—11,000 feet elevation; T. S. Ware.

VANDA SUAVIS SCHRÖDERIANA.—A charmingly beautiful and distinct variety of this fine Eastern species, differing from the ordinary form in its pure and unspotted lemon-yellow sepals and petals, and its pure white lip. The column also is white. Awarded

a 1st-class Certificate R.H.S., September 11; introduced by Messrs. Veitch & Sons, and flowered by Baron Schröder.

VRIESEA HELICONIODES, *Lindley (L'Illustr. Hort., t. 490)*.—A very handsome species of Bromeliaceæ, introduced from New Grenada, and known in various gardens under the names of *V. Falkenbergii* and *V. bellula*. It forms a tuft of moderate-sized recurved leaves which are green on the upper surface, and stained with violet-red beneath, and produces a short erect spike of flowers, having boat-shaped distichous and spreading bracts of a bright rose, tipped with pale-greenish yellow, from which issue the white flowers; New Grenada and the Valley of the Magdalena; Compagnie Continentale d'Horticulture.

NEW PUBLICATIONS.

The BOTANICAL MAGAZINE for September contains plates of *Crinum Hildebrandtii*, Vatke [t. 6709], a well-marked new species, allied to *C. erubescens*, with ovoid bulbs, lanceolate leaves, and umbels of 6—10 long-tubed narrow-lobed white flowers, on slender ancipitous scapes; Comoro Islands; Kew.—*Tulipa Kolpakowskyana*, Regel [t. 6710], a showy hardy bulb, a near ally of the common garden tulip, with ovoid bulbs, one-flowered stems, lanceolate glaucous unspotted leaves, and large campanulate cherry red slightly scented flowers. The flowers vary to yellow flamed with red, or pure yellow with a blackish eye; Turkestan; H. J. Elwes, Esq.—*Leucojum hyemale*, D.C. [t. 6711], also called *Galanthus autumnalis* and *Acis hycmalis*, a graceful little Snow-flake from the Maritime Alps, with small globose bulbs, 2—4 cotemporary erect linear leaves, and one or two-flowered peduncles of small drooping white flowers; G. Maw, Esq.—*Primula floribunda*, Wall. [t. 6712], a neat little glandulose-pubescent Himalayan Primrose, with a woody rootstock, ovate or elliptic leaves narrowing into a broad petiole, conduplicate in veneration, the flowers which are in superposed leafy whorls being small and yellow; Edinburgh and Kew.—*Senecio concolor*, D.C. [t. 6713], an herbaceous perennial greenhouse species of groundsel, having a tuft of narrowly oblanceolate entire or toothed greyish hairy leaves, narrowed into a long leafy petiole, and loose corymbs of dull purple flowers with a white disk.

The GARDENERS' CHRONICLE (Aug. 18—Sept. 15) describes as novelties the following plants:—*Lycaste Smeana*, Rehb. f. (p. 198), a species or natural hybrid resembling *L. Deppei* in its pseudobulbs and habit of growth, but in the sepals petals and lip recalling *L. Skinneri*. The flowers are white, with a light purple border to the triangular acute undulated front lobe of the lip, which also has rows of small purple stripes and spots over its surface; there are some purple spots on the inner face of the sepals.—*Peristeria ephippium*, Rehb. f. (p. 181), a fine Orchid, allied to *P. pendula*, having spotless flowers of some pallid colour—white ochre or light yellow—not determinable from the dried plant; imported from Western South America by Mr. F. Sander.—*Odontoglossum velleum*, Rehb. f. (p. 181), a fine species recalling *O. Karwinskii*, producing dense (not lax) racemes of yellowish flowers, having the sepals and petals marked with sepia brown spots and lines, while the ligulate undulate hairy blade of the lip is white covered with numerous purple-mauve lines and blotches; F. Sander.—*Chrysanthemum corymbosum* (p. 200, fig. 31), a hardy herbaceous tall-growing perennial with profuse heads of white flowers, "the best and most effective of its near allies" in the herbaceous garden at Kew.—*Veitchia Johannis* (p. 205, fig. 32), an interesting palm of the pinnate-leaved type, with the leaf-segments obliquely truncate, minutely dentate, the midrib terminating in a small

curve; it is found in Fiji and the New Hebrides, and was first introduced by Mr. John G. Veitch after whom it is named.—*Armeria cephalotes bracteata* (p. 213, fig. 34), is a striking form of the broad-leaved Thrift, with rich rose-pink flowers, the heads of which are surrounded by recurved green leaf-like bracts upwards of an inch long.—*Vanilla Pfaviana*, Rehb. f. (p. 230), a Mexican climbing Orchid, with slender zigzag stems, having oblong suddenly acuminate fleshy shining leaves six inches long, and green flowers with a three-parted white lip; M. Pfau.—*Masdevallia calura*, Rehb. f. (p. 230), a rather pretty species allied to *M. marginella*, having very thick distinctly stalked leaves, and bluish-purple flowers with a well-developed cupula, and long tails covered on the inner surface with blunt warts; the petals and lip are brownish-purple; F. Sander.—*Duvalia angustiloba*, N. E. Brown (p. 230), a curious very floriferous Asclepiad, with glabrous subglobose or oblong obtuse-angled dentate stems an inch long, and numerous cymes arising from about the middle of the younger stems, the flowers star-like, chocolate-purple with a white corona; S. Africa; Kew.—*Doronicum plantaginicum excelsum*, N. E. Brown (p. 230; 296, fig. 43), a showy tall hardy perennial, which originated as a chance seedling with the late Rev. H. Harpur-Crewe; it grows five feet high, and has broadly ovate, acute roughly hairy leaves 4—8 inches long, and yellow flower heads with a yellow ray 3—4 inches in diameter; blooms from March till October; C. W. Dod.—*Iris Milesii*, M. Foster (p. 231), a Himalayan species of the Evansia section, with stout sword-shaped leaves 2—3 feet long, and rather small fugaceous flowers of a reddish-purple or plum colour, on scapes 3 feet high or more.—*Sarcanthus belephorus*, Rehb. f. (p. 262), a small flowered species, with ligulate undulated bilobed leaves, and panicles of ochre-coloured flowers, smaller than in *S. rostratus*; F. Sander.—*Phalaenopsis Valentini*, Rehb. f. (p. 262), a very pretty Malayan Orchid with flowers in the way of *P. violacea* but smaller, the leaves light green not crispy, the flowers purple, the petals and lateral sepals white at the base, the lip with a pandurate front lobe mauve and yellow, the side laciniae white with purple spots, and the column yellow; it looks like a cross between *cornu cervi* and *violacea*; Low & Co.—*Vanda Roxburghii Wrightiana*, Rehb. f. (p. 262), a pretty sub-variety of *V. Roxburghii purpurea*, the purple-lipped type, differing in the very short lip, and the anterior teeth of the side lobes; E. Wright, Esq.—*Cypripedium tonsum*, Rehb. f. (p. 262), a dwarf tessellated-leaved Lady's Slipper from the Sonda Isles, allied to *C. javanicum*; it has narrow ligulate acute minutely bidentate leaves, marked as in *C. Dayanum*, and flowers of which the back sepal is white with green nerves, the petals oblong ligulate acute, green washed with sepia, with a few dark blotches on the edge near the upper sepal, and some large ones in the central line, while the lip is greenish washed with sepia; collected by Mr. Curtis; Veitch & Sons.—*Masdevallia gemmata*, Rehb. f. (p. 294), a lovely dwarf Orchid, with tufts of fleshy cuneate-linear leaves, 2—4 inches long, obscurely three-toothed at the apex, and solitary ochre-coloured flowers having orange tails, the lateral sepals having the inner halves large and more projecting, purple in the anterior part, where they are studded with gem-like papillae; J. O'Brien.—*Masdevallia Gaskelliana*, Rehb. f. (p. 294), a small saccolabiate species allied to *M. radiosa*; the leaves are rather thin lanceolate-acute, about 4 inches long, densely tufted; the flower cup is yellowish, hairy, full of mauve spots, exteriorly purple-mauve, as are also the tails, the long narrow calceolar lip being yellow; H. Gaskell, Esq.; F. Sander.—*Cœlogyne præcox tenera*, Rehb. f. (p. 294), a fine variety pro-

ducing its leaves with the blossoms; the flowers are very light delicate lilac, with yellow disk and a few purple-mauve blotches on the lip; W. Bull.—*Cypripedium macropterum*, Rehb. f. (p. 294), already noted at p. 182 (1882); Veitch & Sons.—*Cœlogyne salmonicolor*, Rehb. f. (p. 328), a species in the way of *C. speciosa* but much smaller, with tetragonal pear-shaped pseudobulbs, cuneate oblong undulated leaves, green at the base, otherwise copper-coloured, and one-flowered peduncles bearing salmon-coloured flowers with oblong ligulate sepals and linear petals, and a trifold lip with a light salmon ground colour, the side lobes tessellated with light brown bars, and the middle lobe with two retuse keels the area between which is tinted and marbled with brown; from the Sunda Islands; Veitch & Sons.—*Oncidium litum*, Rehb. f. (p. 328), a Brazilian Orchid, allied to *O. Forbesii*, with long thin pseudobulbs, and flowers having the usual narrow yellow border around the broad brown disk of the sepals and petals, the lip having its claw yellow with small brownish spots, the anterior part wholly brown; W. Bull.—*Dendrobium eiliatum breve*, Rehb. f. (p. 328), a variety differing only in the short 4—5 jointed stems or pseudobulbs; sent from Rangoon by Col. Benson; Veitch & Sons.—*Phaius albus flavotinetis*, N. E. Brown (p. 334), a slight variety differing in having the front part of the lip yellow; R. Young, Esq.—*Vanda suavis Schröderiana*, Hort. (p. 336), a very fine and distinct form, with pure lemon-yellow sepals and petals, and a pure white lip and column; Baron Schröder.—*Tigridia Pavonia alba*, Hort. (p. 339), an interesting variety of the old showy Tiger flower, in which the blossoms are white instead of scarlet, the base of the perianth segments being spotted with brown on a yellow ground, as in the original. It is the *T. grandiflora alba* of some gardens, and is a highly ornamental plant.

GARTENFLORA (Aug.) contains figures of *Anagallis eollina alba*, Damman [t. 1125], a dwarf tufted growing suffruticose annual plant with small linear-lanceolate leaves, and a profusion of satiny-white star-shaped flowers, here represented half the natural size—*Parrya nudicaulis*, Regel [t. 1126, a, b], a dwarf perennial, with lanceolate leaves, and corymbs of pale purple cruciferous flowers; Turkestan; A. Regel.—*Oxalis tuberosa*, Molina [t. 1126, c—c], the Oca of Chili, a tuberous-rooted species with erect branched stems, which as well as the trifoliate leaves are pubescent, and yellow flowers.—*Lathyrus Davidi*, Hance [t. 1127], a perennial branched pea four feet high, the leaves with semi-cordate stipules, and 3—4 pairs of oval leaflets, and long peduncles bearing 6—7 ochroleucous flowers which turn yellow in age; flowers in July; Japan and N. China; St. Petersburg Botanic Garden.

L'ILLUSTRATION HORTICOLE (8 liv.) contains a fine figure of *Cattleya aurea*, Linden [t. 493], the *C. Dowiana aurea* of some authors, a showy epiphyte with monophyllous stems, broad oblong obtuse leaves, and large pale yellow flowers, with the subcordate three-lobed lip, the side lobes of which are folded over the column, striped with purple, and the broad undulated front lobe magenta, with three bold orange coloured veins in the centre, and the rest of the surface except the extreme front closely reticulated with golden yellow; introduced from Colombia; J. Linden.—*Zonal Pelargoniums* [t. 494]: *Le Cygne*, double white; *Madame Jay Gould*, double purplish crimson; *Commandant Rivière*, single orange-scarlet; *M. Jules Malon*, single deep rose pink the upper petals white at the base.—*Cienkowskia Kirkii*, Hook. f. [t. 495], a handsome stove Scitamineous plant, with tuberous roots, 3—5 distichous elliptic ovate leaves, and a many-flowered erect scape of large delicate pink flowers produced with the foliage; Zanzibar; Kew.

GARTEN-ZEITUNG (Sept.—Oct.) represents on one plate three kinds of Lady's Slipper (p. 375), namely *Cypripedium Warnerianum*, Moore (figs. 1, 2), *C. Lawrenceanum*, Rehb. f. (fig. 3), and the old *C. spectabile* (fig. 4)—all reduced in size, and indifferently coloured.—*Dioon spinulosum*, Dyer (p. 411; fig. 80, p. 439), a new Mexican species in which the lanceolate segments of the leaf have about six spinose teeth on either margin.—A group of *Wild Italian Nareissi* (p. 421); the species figured are *N. eanalieulatus*, Guss. (fig. 1), *N. italicus fl. pl.* (fig. 2), *N. concolor*, Herb. (fig. 3), *N. aureus*, Lois. (fig. 4), *N. papyraceus*, Gawl. (p. 5), and *N. unicolor*, Ten. (p. 6); all the figures are considerably reduced below natural size.

REVUE DE HORTICULTURE BELGE, &c. (Sept.) has a good figure of *Veronica Traversii*, a very pretty branched neat habited shrubby species from New Zealand, with small myrtle-like decussate leaves, and oblong spikes of comparatively large white flowers.

BULETIN D'ARBORICULTURE, &c. (Aug.) has a coloured plate of *Pear Olivier de Serres*, the description of which is deferred.

JOURNAL DES ROSES (Sept.) figures the *Bourbon Rose Comtesse de Barbantanne*, a variety raised by M. Guillot père, and sent out in 1858; it is a seedling from Reine des Iles Bourbon, with medium-sized double globular flowers of a beautiful tint of flesh-colour.

L'ORCHIDOPHILE for August (No. 27) contains a phototype plate of the magnificent specimen of *Vanda Lowii* (alias *Renanthera Lowii*) bloomed at Ferrières. This plant, which is well furnished with leaves to the very base, has developed eleven flower stems each about 10 ft. in length—total length of flowering stem 110 ft.—on which are borne no fewer than 280 blossoms. It is a most extraordinary specimen, and does great credit to the cultural skill of M. Bergman.

REVUE HORTICOLE (Sept. 1—15) figures *Stenomeson Hartwegii* (p. 396), a pretty little Amaryllid from Ecuador, with bright orange coloured flowers, produced always before the leaves are developed; introduced by Hartweg to Chiswick about 40 years ago.—A *New Hybrid Rhubarb, Florentin* (p. 420) is the subject of a coloured plate, and represents a very handsome plant, with deeply lobed leaves after the style of *R. palmatum*, and paneled cylindrical spikes of bright carmine red flowers, after the manner of *R. officinale*. We have ourselves raised some interesting hybrid forms between *R. officinale* and *R. Emodi* from seeds communicated from the garden of the Royal Botanic Society where the two species just named flowered in close proximity and must have been accidentally fertilised, as the plants are perfectly distinct in foliage from *R. officinale* from which the seeds were gathered, but retain the peculiar style of inflorescence.

The GARDEN (May 26—Sept. 15) contains coloured illustrations of the following:—Varieties of *Pernettya mucronata* (pl. 389). *Nepenthes Mastersiana* 1—2, *N. Chalsoni* 3, *N. Morganii* 4 (pl. 390). *Rose Marie Baumann* (pl. 391). *Callicarpa purpurea* (pl. 392). *New Chrysanthemums*: 1 *Tisiphone*, 2 *Ringleader*, 3 *Orange Beauty* (pl. 393). *Sisyrinchium grandiflorum* (pl. 394). *Dendrobium Leechianum*, nobile × aureum (pl. 395). *North American Wild flowers* (pl. 396). *Calanthe Regnierii* (pl. 397). *Iris stylosa* (pl. 398). *Pavonia Wiotii* (pl. 399). *Lælia harpophylla* (pl. 400). *English Cottage Garden* (pl. 401). *Begonia Roezii* (pl. 402). *Eleocarpus cyaneus* (pl. 403). *Dendrobium nobile nobilium*, and *D. nobile Walliehanum* (pl. 404). The *Trumpet Daffodils* (pl. 405).

GARDEN GOSSIP.

WE are glad to find that a NATIONAL APPLE CONGRESS is to be held in the Royal Horticultural Society's

Gardens at Chiswick, to take advantage of the present favourable opportunity for examining the numerous varieties cultivated throughout the country with the object of correcting their nomenclature; and of comparing their merits. For this purpose the Council of the Royal Horticultural Society have given the use of their Great Conservatory; and the collection of Apples grown in the Garden, which contains many typical varieties, will be available for comparison. The Conference will commence on October 4 and continue till October 18, but will not take the form of an ordinary Exhibition, as there will be no competition and no prizes—the sole object being to seize so favourable an opportunity of gaining information, and making the meeting instructive and educational. All fruit growers are invited to send, and the more widely the collections are procured, the greater will be the interest created by the Exhibition. Every collection should be accompanied by information with regard to soil, exposure, and physical conditions of the district from whence it comes. No limit will be put upon the number of sorts to be sent, nor is it at all necessary that they should be the product of the exhibitor's own grounds, but it is suggested that not fewer than two nor more than six examples of each kind should be sent, all *distinctly labelled with the name or names under which they may be known in their respective localities*. All packages must be sent to the Secretary, Mr. A. F. Barron, R.H.S. Gardens, Chiswick, on or before the 3rd of October. It is to be hoped that Apple growers throughout the country will heartily assist.

— It has been decided, at a meeting presided over by the Chairman of the International Fisheries Exhibition, that a GREAT INTERNATIONAL EXHIBITION OF HORTICULTURE AND FORESTRY shall be held at South Kensington during the spring, summer, and autumn of 1885. It is well that an early decision has been come to, as it will take some time to get the matter into working order. The most doubtful part of the scheme, so far as it is shadowed forth, is that of keeping up a continuous Flower Show, which, without a large amount expended in repeating prizes, would be a failure, while unless it be competitive, it would be a nullity from a horticultural point of view. The best plan would probably be to get together a thoroughly good show of imperishable articles, and to have this decorated more or less by floral subjects, as the groundwork of the Exhibition, confining the Horticultural Exhibition proper to a week or fortnight at the height of the season, when a special effort could be made which would doubtless be successful, if a good schedule of prizes were issued. That is the conclusion to which our experience of Great Exhibitions at home and abroad distinctly points.

— THE finest specimen of the singular DARLINGTONIA CALIFORNICA to be found in any private, or probably in any public collection, as we learn from our Irish friends, is one in the gardens at Mount Merrion, Dublin. Nothing can exceed the health, cleanliness, and vigour of the plant, which numbers, large and small, some score of its marvellous leaf developments, some of them fully three feet high, their tessellated and semi-transparent domes being a span or more across. Mr. D. Welsh,

the very capable gardener at Mount Merrion, deserves to be congratulated on the success of his treatment of this most singular production.

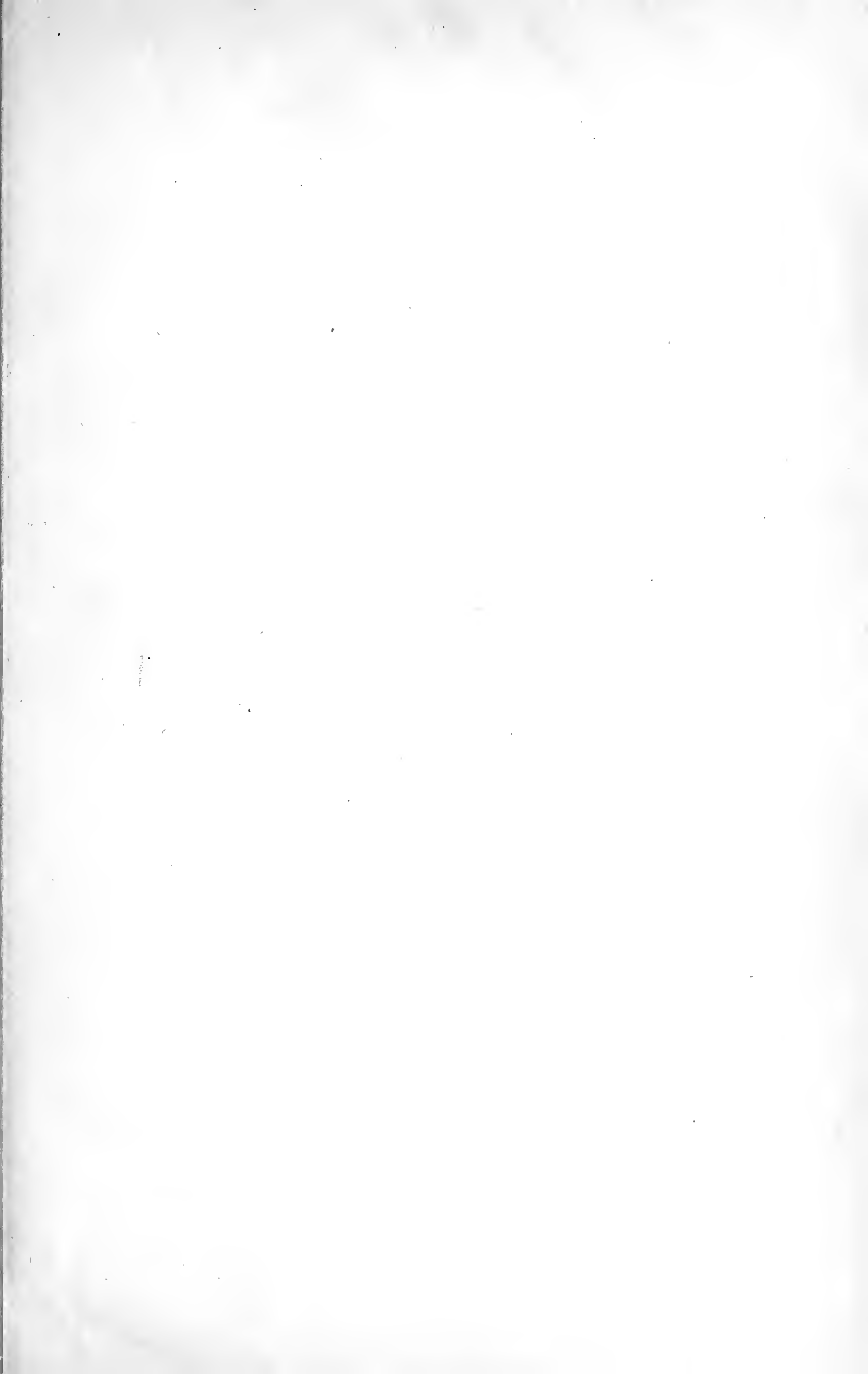
— AMONG the NEW AZALEAS at Ghent, which were very fine indeed, we noted the following as special acquisitions:—Madame de Kneef, pure white, very fine. Madame Alfred Chaler, large, smooth, and finely-shaped, dark rose with rich crimson spots. Comtesse Zebrowska, semi-double white, of large size and excellent substance. Charles C. Brigham, intense crimson scarlet. Princess Beatrice, double, pure paper-white. Souvenir de Princess Alice, double, rosy cerise, very bright. Mons. Labrousse, rich rosy-cerise, with no spots, fine in size and shape. John Hawksworth, double, rich salmon, large and very fine. Mrs. B. S. Williams and Mrs. Harry Veitch, both semi-double whites, of first-rate quality. Baron Nathaniel de Rothschild, a novel shade of purplish-violet. Madame Ad. Van Wassenhove, large full double, pink, with white margins and crimson spots. Comtesse Adrien de Germigny, rich salmon with dark chestnut-brown spots. J. T. D. Llewelyn, a double, peach with crimson spots, very pretty. Perle de Gand, semi-double, salmon red with fine broad petals. Madame Labrousse, of the same style and form as the last, but rose colour. Monplaisir, very round and semi-double, the tuft of petaloid filaments in the centre being surrounded by large segments, after the manner of the Hollyhock.

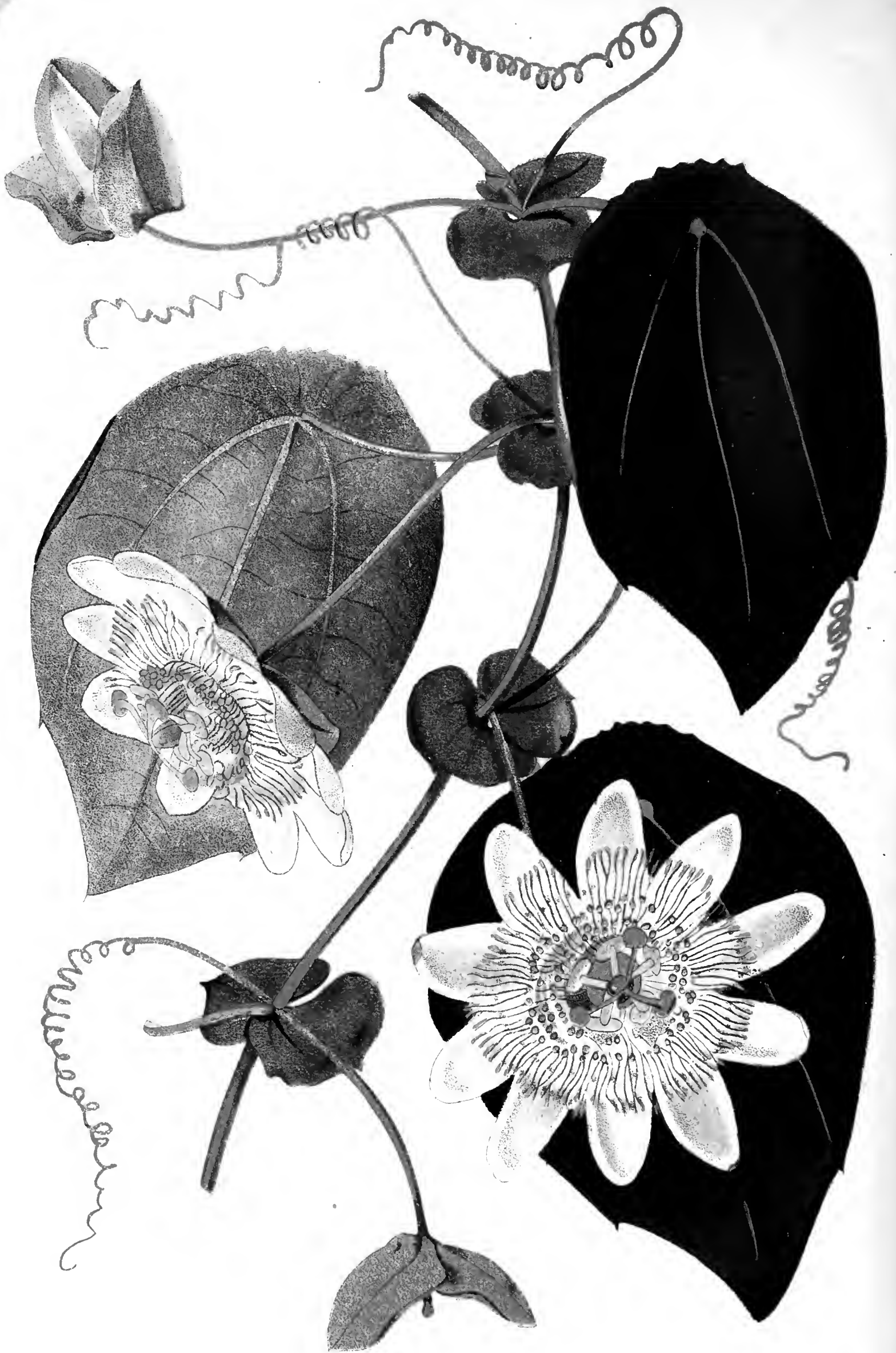
In Memoriam.

— MR. H. B. ELLWANGER, son of Mr. G. Ellwanger of the firm of Ellwanger and Barry, Rochester, N. Y., died from typhoid fever, on August 7, in his 33rd year. His loss will be severely felt by the horticultural community on account of his intelligent appreciation of and hearty engagement in genuine horticultural work. Though still young he had become a leading authority on all that concerns Roses and Rose-culture, his little book *The Rose*, published only last year, showing a singular aptitude to deal with the subject in a masterly manner.

— DR. J. A. WARDER died at North Bend, on August 15, in his 72nd year. Few men have done more to awaken an interest in horticulture in the United States than Dr. Warder, whose *Pomology* is the nearest attempt yet made, says Prof. Meehan, to place the descriptions of fruits on a scientific basis. "It will stand as the best advance ever made by a single author on scientific pomology." As a botanist too Dr. Warder has done good service. He was the first to discover that the American flora contained two species of *Catalpa*.

— THE REV. HENRY HARPUR-CREWE, died at the Rectory, Drayton Beauchamp, on September 7, after a long illness, aged 54 years. He was a true lover of plants, and as such well known and deeply respected by all the leading horticulturists of the day. His special element was garden botany, and his knowledge of hardy plants very comprehensive, added to which his active sympathy in every movement for the advancement of horticulture endeared him to a large circle of friends. He was a member of the Council of the R.H.S., and also Chairman of the Floral Committee, by whom, at the meeting of September 11, a vote of condolence and sympathy with Mrs. Harpur-Crewe was passed.





W H. Fitch del.

Passiflora Hahnii.

PASSIFLORA HAHNII.

[PLATE 597.]

THIS elegant Passion-flower was introduced to the French gardens from Mexico a few years ago, but does not appear to have become much known in this country. We saw it not long since in one of the cool stoves at Pendell Court, the residence of Sir G. Macleay, Bart., and were much pleased with its distinct and interesting appearance, the abundant flowers being nicely set off by the purple under surface of the singularly formed leaves. It is a climber well worthy of more extended cultivation, and with the object of making it better known we have had the accompanying figure prepared by Mr. Fitch, from specimens communicated by Mr. C. Green, the clever head of the garden establishment at Pendell Court.

The plant has smooth slender stems, roundish perfoliate stipules, and peltate leaves, which are oval in outline, rounded and crenulate glandulose at the base, three-nerved, deep green above and reddish purple beneath. The flowers are of a creamy-white, about three inches across with a diphyllous involucre at their base, and a double pale yellow corona within, the outer series of which has flattened filaments, and the inner has the filaments much shorter than the outer.

This Passion-flower will succeed in a warm greenhouse, but like all others of the family should be planted so as to encourage free growth; it then produces a profusion of flowers, and is really a very elegant and pretty species.—T. MOORE.

THE APPLE SHOW AT CHISWICK.

THE "National Apple Congress" was inaugurated by a few enterprising pomologists in order to utilise for purposes of instruction the great Apple crop of the present year. The Royal Horticultural Society gave every facility for the fruit to be brought together and displayed at Chiswick, and the result was that with very little preparation or stimulus some eight or ten thousand dishes of fruit, consisting of probably not fewer than a thousand reputed varieties, were staged by about two hundred exhibitors. The several collections have been scrutinised by experts, members of the Fruit Committee and others, aided by the Society's most energetic Superintendent, Mr. A. F. Barron, and the results of their examination will in due time, it is hoped, be made public, in an authorised and trustworthy report. There has already appeared in the *Gardeners' Magazine* an audit of the unexampled display, giving the names or reputed names of the sorts exhibited, with the number of dishes of each which were set up, and from this it appears that the well-known Blenheim Pippin heads the list, there having been as many as 166 dishes of it staged. The other sorts most extensively shown were—Wellington (Dumelow's Seedling) 132, Warner's King 121, Ribston Pippin 102, Cox's Orange Pippin

101, Cellini 97, King of the Pippins 95, Lord Suffield 84, Winter Hawthornden 81, Stirling Castle 67, Golden Noble 64, Cox's Pomona 63, Keswick Codlin 63, Manks Codlin 58, Court Pendu Plat 57, Hawthornden 57, Mère de Ménage 57, Alfriston 56, Emperor Alexander 56, Kerry Pippin 55, Royal Russet 55, Ecklinville Seedling 54, Golden Pippin 54, Fearn's Pippin 53, Beauty of Kent 51, Sturmer Pippin 51, Cockle's Pippin 50, and Scarlet Nonpareil 50. There were between 40 and 50 dishes each of Adams' Pearmain, Claygate Pearmain, Dutch Mignonne, Gloria Mundi, Lemon Pippin, Margil, Nonpareil, Northern Greening, Reinette du Canada, Tower of Glamis, and Yorkshire Greening; and between 30 and 40 each of Annie Elizabeth, Bedfordshire Foundling, Bess Pool, Court of Wick, Downton Pippin, French Crab, Golden Reinette, Hanwell Souring, Hollandbury, Lady Henniker, London Pippin, Lord Derby, Mannington's Pearmain, Nonsuch, Norfolk Beefing, Peasgood's Nonsuch, Rymer, Small's Admirable, and Wyken Pippin.

Where as in this case the amount of material brought together was so overwhelming, it is better to wait for the authentic report for such information as to synonymy as may be gathered up. The fruit was arranged

according to the counties from whence it came, which served to bring it into something like order. That from Kent took the lead, closely followed by Middlesex, Surrey, Herts, Sussex, and other southern counties. We add a few general remarks from the reports published in the *Gardeners' Chronicle*.

"Of HIGH-COLOURED APPLES, we may say that here and there some kinds not usually associated with high colour show very ruddy cheeks, and we much doubt whether any one ever saw richer hues on the Ribston Pippin than grace the dish of that kind in the Messrs. Cheal's collection. There is no mistaking the fact that Sussex and Kent with their chalky subsoils, free pure currents of air, and ample sunshine, are pre-eminently the counties in which colour is the most abundantly created. Now, dealing with a selection of twelve Dessert kinds in the show that are rich in crimson and red hues, we found perhaps the handsomest to be 'Honeymoon,' in the collection sent by Messrs. Jefferies from Cirencester. This is so beautiful that it attracted our attention the first day, and we have learned since that it has been found to be but a small though a wondrously coloured Hoary Morning, that through obscure writing had got thus transposed. Some samples of Red Astrachan, our earliest deep-coloured Apple, are in the show, but they are too far gone. Red Quarrenden is still fairly good. Duchess' Favourite, or less well known as Duchess of Gloucester, very handsome, medium in size, and of very moderate quality. Worcester Pearmain, the handsomest of all the early reds, and a worthy successor to that new and beautiful kind Mr. Gladstone, which is too precocious in ripening to enable it to be seen in October. Colonel Vaughan is a smallish, conical-shaped kind, superbly coloured, but of no great merit otherwise. Sops in Wine is a very ancient uneven sort, richly coloured, but of capital quality, as also is the Summer Strawberry; Court Peadu Plat, and its near relative, Fearn's Pippin, are too well known to need further reference, but Calville Rouge Précoce in the Chiswick collection bears considerable resemblance to Fearn's Pippin, and is a very handsome Apple. A very beautiful kind is to be found in Cheal's Ede's Beauty, which has a primrose skin, heavily striped with red, and is in form roundish angular. Finally, the dozen includes Baumann's Red Reinette, shown by the Messrs. Veitch & Sons, a fine-coloured late-keeping kind, that should make a capital market variety.

"Of Kitchen kinds of remarkable colour are Mère de Ménage, Cox's Pomona, Hoary Morning, a very odd name for such a rich-coloured Apple; Hollandbury, sometimes known as Scarlet Admirable; Emperor Alexander, Tom Putt, very old, intensely coloured, and of irregular form; Premier, not unlike the previous one; Winter Quoining, an ungainly Apple; Rosenberger, in Mr. Loney's Swedish collection, richly striped and coloured like Pomona, but less ribbed; Cellini Pippin, generally in southern districts rich in colour; Striped Beefing, so good a keeper; and that excellent kind, Beauty of Kent. We are tempted to ask here, whether it is not the case that high colour and good quality are seldom associated? Of all the kinds just mentioned hardly one can be termed first-class, and few are firm good keepers. Colour may be a profitable market commodity, but it is not the only feature to be sought for in furnishing a selection of good Apples.

"Closely allied to the high-coloured ones come the HANDSOME FRUITS as distinguished from colour, those of particularly good form that have pretty

markings and are always admired for their beauty. In this selection also we do not find the best quality, though many are very good in their season, but it is too often a short one. Thus we take the Queen, broad, handsome, beautifully striped; Peasgood's Nonsuch, the handsomest of all big Apples, but not a keeper [nor a good bearer]; Washington, a very beautiful Apple, but already past its season; Grenadier, a noble-looking fine yellow-skinned kind, that is a beat upon Lord Derby in form; Warner's King, always handsome and very good in its short day; Stirling Castle, a wonderfully prolific early kind; Frogmore Prolific, a very handsome sort that well justifies its name, and which is very good to the end of the present month; Lord Suffield, invariably handsome when it puts on its ripened hue of primrose-yellow; Winter Hawthornden, one of the best of the batch as a keeper; Golden Noble, the handsomest yellow-skinned Apple we have, and which ought to be classed, for the behoof of all those who like a little brisk acidity in their fruits, as a dessert kind; Blenheim Pippin, our ever acceptable friend, but of the two better as a cooker than as a dessert kind; and, lastly, that very handsome prolific [and long keeping] Apple, of which yet growers generally know so little, Lane's Prince Albert. All these are fairly handsome, and whilst some are good only for a short time others are so over a lengthened period.

"Then there is a similar selection of pretty dessert kinds in which we place Duchess of Oldenburg, Jefferson, Nonsuch, and Kerry Pippin, all handsome striped sorts; indeed, those who saw samples of the old Nonsuch would readily admit that the very handsome Peasgood's Nonsuch is of the old one an enlarged *fac simile*. Cowan's Victoria, about the size of fair Cox's Orange Pippin, is a very handsome kind, and our useful friend, King of the Pippins, must, too, come into the group of pretty ones. Swedish Pearmain in the Chiswick group, and also found in Mr. Loney's collection, is a very handsome Apple that is but yet little known. Court of Wick, Golden Reinette, and Wyken Pippin are all pretty and really good dessert Apples; and Mabbet's Pearmain—speckled with russet, but handsomely flushed with colour, on a yellow skin—is a little grown variety.

"There yet remain selections of both sections that, as all Apples are, more or less, good-looking, are yet more serviceable than beautiful. Here among COOKING APPLES we find that capital early kind, Lord Derby; Waltham Abbey Seedling, of all good cooking kinds one of the best and most prolific; Alfriston, so big, so good, and so enduring, though the trees are not of the hardiest; Reinette du Canada, a splendid keeper; Gloria Mundi, sometimes confounded with Belle du Bois, a very fine variety, and keeps well; Stone's Apple, a fine market variety, that is very prolific; Wellington, one of our most regular croppers and best keepers [but tender]; Ecklinville, very fine early and certain cropper, but though of good form it is almost always spotted, as though it had been peppered with hailstones; Nelson Codlin, a green conical fruit, covered with bloom, and both a marvellous cropper and good keeper; Small's Admirable, not unlike Hawthornden, but a hardy, robust kind, and a splendid cropper and keeper; Bedfordshire Foundling, a well-known fine kind; and last, that fine old sort, Norfolk Beefing, that keeps so well for summer use.

"DESSERT APPLES, selected chiefly to show table quality and flavour, include some kinds that are of excellent shape, though, perhaps, not termed pretty. Ribston, Cox's Orange, Cornish Gilliflower, Sturmer, and Cockle's Pippins are absolutely unsurpassable for flavour, the two latter kinds being excellent late keepers. Irish Peach is one of our best early dessert

Apples, and a fine cropper; Cornish Aromatic has soft flesh, and a delicate balsamic flavour; Scarlet Nonpareil is so good that it better befits this selection than the coloured one; Margil is as good as it is old, and the American Mother Apple is a fine flavoured kind that seems to be but indifferently known, though it certainly is one of the hardiest of all the American sorts. Rosemary Russet is a splendid winter dessert Apple, and finally there come the capital Pearmain, Adams' and Mannington's, both fine keeping kinds, and of the best table quality. In these selections we find we have swallowed up seventy-two kinds, and still leave myriads of very good sorts unmentioned. To not a few readers there will crop up sorts that might have been placed here and there; but our selections were carefully made at the show with myriads of dishes before us from various parts of the kingdom, and average character naturally forms a more reliable test for selection than do mere local features.

"OF FOREIGN APPLES a remarkably fine and interesting collection has been sent by Mr. G. R. H. Star, of Port William, Nova Scotia, whose London agents, Messrs. Nothard & Lowe, have admirably set up, and further increased the value of the collection by indicating those sorts which are generally sent from Nova Scotia to the English market. These are the Baldwin, Rhode Island Greening, Cooper's Russet, Blue Pearmain, Talman's Sweet, Gravenstein, Flushing Spitzenberg, King of the Pippins, Willoughby, Golden Russet, King of Tomkins County, Sweet Russet, Pomme Gris, Golden Pippin, Ribston Pippin, and Mammoth Russet. Most of these are of medium size, and several of them highly coloured, but all, by comparison with home-grown samples, are of low specific gravity. As regards handsome appearance, these Nova Scotian Apples compare most favourably with the best of our own, but contain much less water and sugar. Such varieties as the Emperor Alexander, Fall Pippin, Chebucto Beauty, Dutch Codlin, and Cat's Head are finely represented.

"Another collection is that sent by Mr. Loney, gr. to Oscar Dickson, Esq., Gothenberg, Sweden, and which consists of twenty-eight dishes of Apples and a dozen of Pears—all the results of orchard-house cultivation, and superb in quality. Among the Apples are grand samples of Cellini, Calville Blanche, Red Astrachan, Rasenhäger, a handsome crimson-striped flattish-round variety; Margil, Rosen Gyllen, handsomely striped or streaked; Court Pendu-Plât, and Winter Pearmain. Among the Pears are large examples of Duchesse d'Angoulême, Beurré Bachelier, Pitmaston Duchess, Maréchal de la Cour, Marie Louise, Souvenir du Congrès, Doyenné Boussoch, Huyshe's Bergamot, Bonne d'Ezi, and Joséphine de Malines. The whole collection reflects high credit on their cultivator, and adds much to the interest of the exhibition.

"It is surprising that of the many new and old, but not much known varieties that have been sent to Chiswick, only two NEW VARIETIES have been deemed by the committee to be worthy of First-class Certificates. One of the best is a seedling raised at Southwell, Notts, by a shoemaker, named Bramley, and called Bramley's Seedling; it is a culinary variety of the form of Small's Admirable, but larger than that variety ordinarily comes, and is said to bear profusely every alternate year when the tree attains the age of ten or twelve years; it is not an early bearer, but the tree is stated to be hardy and robust, makes a fine orchard specimen, and produces one of the finest types of market fruits. The other is the Grenadier, shown by Messrs. G. Bunyard & Co., of Maidstone; it is of the first size, somewhat flat round in shape, and angular or ribbed, with a clear yellow skin, small, closed eye, and short stalk;

a first-rate culinary variety, in use during October and November.

"An old variety, new to most of the visitors we suspect, but a good dessert sort as regards quality, and very pretty as to colour, is the Nanny Apple, a variety which as stated is peculiar to the neighbourhood of Midhurst, Sussex, where it has been grown for the last century, but is said to be now fast becoming extinct—a contingency which it may be hoped its exhibition here by Mr. G. Chorley, of Midhurst, will prevent. It is ripe now, and does not keep well beyond Christmas, and the tree is a good bearer. Another very pretty Apple which appears in two Sussex collections is a variety which Mr. Ford calls King, and which the Messrs. Cheal, of Crawley, who show a handsome dish grown by R. Hoper, Esq., of Cowfield, Horsham, labelled as the Ramboon, Cider Steer, or King Apple."

It has been well remarked in reference to this interesting Apple exhibition, that a very noteworthy feature of it was its entire unselfishness. There was no inducement held forth in the way of competition or prizes, the sole object of the projectors and contributors being to benefit pomology; and it must be admitted that right liberally has the call of the former been met by the latter.

The finest Apples in the show came from Kent, the garden of England, amongst which probably those staged by Mr. Haycock, gardener to R. Leigh, Esq., M.P., Barham Court, Maidstone, were pre-eminent. His dish of Ribston Pippins, has rarely if ever been equalled for size and rich golden colouring, and the collection altogether manifested the good results of high cultivation. Then probably no handsomer dish of Apples has ever been seen than that of the new American variety Washington, which we figured last year, and which had been grown in the orchard house of T. Moillet, Esq., of Hawkhurst, and was exhibited by Messrs. G. Bunyard & Co., of Maidstone.

PROPOSED PEAR CONGRESS.

I AM glad to see the Apple Congress is such a success. We have some sixty sorts there in all, but we cannot compete in appearance with our southern friends.

Pears would be a good subject to take up next season in order to settle the nomenclature, and to get information as to the varieties suitable for certain soils, &c. This is almost more necessary with the Pear than with the Apple, as the latter fruit can be used if not all equally good; whereas Pears having in nearly all cases to be eaten raw, it is very necessary to grow only such sorts as come reasonably good and ripen well.—H. J. CLAYTON, *Grimston Park Gardens, Tadcaster.*

[We quite agree with Mr. Clayton as to the utility of a Pear Show, and hope the next season may be propitious, and the workers willing.—ED.]

FRAGMENTS FROM ROSE SHOWS.

WE must give the place of honour to Her Majesty, one of Mr. Bennett's new pedigree Roses, a large full flower of splendid proportions and of a beautiful lively pink colour, still more enlivened by being brighter and deeper in the centre. This gained the National Rose Society's gold medal, and was also much admired at the Crystal Palace, where it was awarded a 1st-class Certificate last year.

At South Kensington on the occasion of the Pelargonium Show, Queen of Queens a new Rose, introduced by Messrs. W. Paul & Son, manifested its regal character in the shape of some exquisite blooms from Waltham Cross. It is a light pink Rose, paler than Her Majesty, being rosy pink in the central parts and blush towards the margin; it is also different in shape, being more globular. Like Her Majesty it has been shown more than once during the last year or two, and rejected, or at least not premiated, but this year both sorts have been grandly shown, and have won, what we never doubted belonged to them, a place in the foremost Rose ranks.

At the Crystal Palace Show, in the class for 18 trusses of any kind of Tea or Noisette Rose, Niphetos took the first place, large fresh blooms being shown by Messrs. Keynes & Co.; Jean Ducher, shown by Mr. Prince, came next; and the third place was taken by Innocente Pirola, as shown by Mr. B. Cant.—At the same show, the most striking new Roses, shown in the class for varieties not in commerce previous to 1880, were Pride of Waltham, Mdle. Julie Dymonier, Mons. Alfred Dumesnil, White Baroness, Mrs. Jowitt, and Brightness of Cheshunt.—Further, Mr. H. Bennett received a 1st-class Certificate for his new Rose, Mary Bennett, a very fine rose-coloured variety.

At Bath, a superb bloom of Alfred K. Williams in Mr. Prince's stand, was awarded the National Society's Silver Medal as the finest Hybrid Perpetual in the whole exhibition. The best Tea or Noisette also awarded a Silver Medal, was a magnificent flower of Niphetos, shown by Messrs. Keynes & Co.—The first prize for a stand of twelve single trusses of any Rose was won by Mr. Prince

with a magnificent stand of the Tea Catherine Mermet.—In the class for pink Roses, Messrs. Cooling & Son won the first prize with twelve single trusses of Madame Gabriel Luizet, the soft silvery radiance of which made it a most lovely and conspicuous object.—For six trusses of any New Rose of 1881 or 1882, Messrs. Paul & Son were first with Madame Cusin, a Tea Rose, of good form and substance, a rosy-purple colour with a yellow base to the petals, a style of colouring at once novel and effective.

At Sheffield, Messrs. Paul & Son took first prize for 12 New Roses, not in commerce before 1880, with a stand on which Duke of Albany, deep crimson, George Moreau, George Baker, Rosieriste Jacobs, Pride of Waltham, Ulrich Brunner, and Madame Isaac Perière were the most attractive blooms. In Messrs. Cranston & Co.'s competing stand, were Souvenir de Madame Berthier, reddish crimson, good; Guillaume Guillemot, shell-like fiery crimson, and Ernest Prince.—Messrs. Paul & Son also won first prize in a similar class at the Wirral Rose Show held in St. George's Hall, Liverpool, showing amongst others, Ulrich Brunner, George Moreau, Mrs. Harry Turner, very bright and full, Guillaume Guillemot, Mrs. Jowitt, Merveille de Lyon, Souvenir de Madame Alfred Vy, and Madame Isaac Perière.

In the class for a New Seedling Rose not in commerce, at the Wirral Rose Show, Mr. Frettingham, Beeston, won the gold medal for blooms of Lord Frederick Cavendish, a rose which is full, bright in colour, a robust grower, and much after the style of Duke of Edinburgh in the wood.

At the West of England Rose Show, Mr. Griffiths, Tillington, exhibited a bloom of H.P. Constantine Tretiakoff, of unusual size and perfect symmetry and smoothness, quite unique, and the premier bloom in the exhibition; the colour is cerise-red.

Among the Amateur's classes at the National Rose Show at Southampton, Alfred K. Williams was awarded the Silver Medal of the Society as the best H. Perpetual in the show; it was shown by Mr. J. Ridout, gardener to T. B. Heywood, Esq., Reigate.—The best Tea or Noisette in the same show, also selected for a silver medal, was Maréchal Niel, shown by Mr. Davies, Wilton.

At the Croydon Show, a fine bloom of H.P. Charles Lefebvre, shown by Mr. Bagden, gardener to G. Baker, Esq., Reigate, won the National Rose Society's medal.

At Canterbury, the National Rose Society's bronze medal for the best bloom in the show was awarded to a very fine bloom of Tea Anna Ollivier, shown in a stand of 6, by Miss Hawsworth.

At Maidstone, the N. R. Society's bronze medal for the best Rose in the show was taken by Madame Gabriel Luizet, shown by Mr. Wakeley.—M.

ON GROWING TEA ROSES

IN LARGE POTS OR TUBS.

PERMIT me to express the opinion that, as a rule, Roses in pots, especially Tea Roses, have not sufficient room at the roots to enable them to produce fine blossoms in quantity. This will no doubt sound like a truism to many, especially to those who have houses in which Roses can be planted in well-prepared borders. However, these are not the people I have in my mind as being likely to gain a hint from this note, but the larger class of growers who cultivate Tea Roses in pots, more especially for autumn blooming.

For several years we have had a batch of Tea Roses for this purpose; they have done fairly well, still not quite so much so as I could have wished. Last May when we were about going through them to pot such as required it, and top-dress the rest, the thought struck me that I would strike out from the beaten track a bit, by putting some of the largest plants which were in 12-inch pots into tubs. We at once purchased half-a-dozen thirty-six gallon paraffin tubs from the nearest ironmonger, which cost us 3s. 6d. each; we cut them in two across the centre, put a stout handle on each side, and charred them inside by burning a small bundle of straw in them. This was done to prevent injury to the roots by their coming into contact with oil-soaked wood. After boring a few holes in the bottoms and draining them well, we at once commenced to "tub" our Roses. In doing this we used soil somewhat stiffer than before, say one-sixth part of well-pulverised red clay to four parts fibry loam and one part well-

rotted cow and fowl dung. We did not disturb the balls very much, but just sufficiently so to separate a few fibry roots to work into the new soil. We potted firmly and placed a small rim of clay just on the edge of the old balls to prevent the water running off too freely and souring the new soil. After potting they were allowed to stand for a week or two in a late peach-house, until the weather was more settled, say about the first week in June. After this, we placed them in a well-sheltered position out doors.

During the summer months we kept the bloom-buds picked off them, until the first week in September. To-day (Oct. 15), we have housed them in our early vinery, and expect to have a fine supply of blooms from them until near Christmas. Several have made shoots 5 ft. in length, and are studded with bloom-buds in various stages of development. One plant of Safrano has on it near upon 200 buds. The varieties are Safrano, Madame Lambard, Niphetos, Madam Falcot, and Adam, all of which are, with us, free-flowering sorts.—H. J. CLAYTON, *Grimston*.

VINE BORDERS.

THIS is to gardeners a most, if not the most important season of the year. Much of the success of the coming year depends on the quality of the work done now, and especially as regards our fruit crops.

If you will kindly afford me a little space in your forthcoming number I would like to say a few words regarding Grape Vine Borders. If new ones are to be made, avoid making them very large. Most existing borders are much too large. In my opinion six feet wide and two feet deep is ample for the largest house. Except where the natural soil is suitable to the healthy development of the Vine, when the roots may be allowed to roam at will, the border should be made as impervious to the roots as a flower pot, providing only for perfect drainage. It should consist of good sound rather sandy turfy loam—down turf if it can be had, the tougher the better, with very little, if any, stimulant. But I would speak more especially of existing and exhausted Borders. Exhaustion generally manifests itself in what is called shank-

ing, a sure sign of starvation. Exhaustion often arises from the too free use of gross stimulants, sometimes from badly-drained borders, but from whatever cause it arises there is no remedy but going to the root of the evil, and that is at the root of the Vine, and at the fall of the leaf is the proper moment; take every particle of old soil out; see that the drainage is all right; rearrange the roots, and fill in with the compost suggested.

If the production of first-class Grapes is the object, moderate sized borders should be adopted. Every particle of loose and unoccupied soil should be removed every autumn, and replaced by fresh compost. Every inch of the border should be as thoroughly occupied by roots as the pot of a well-grown pot Vine, and if it is not, depend upon it all is not right. See to it, therefore, that this is the case, and then any amount of feeding either by liquid or rich top dressings may be applied during the growing season.

In the case of Vines which are forced early and have their roots outside, it is necessary that the roots should be suitably protected, but avoid building dunghills over them. For Vines started after the beginning of the year simply a good mulching is sufficient, and this should remain on during the summer to protect the roots—which should be encouraged to the surface—from damage by drought. Except in the case of badly drained borders I should never use any means of keeping off rain, which I consider at all times rather beneficial than otherwise, except perhaps in the very late house where Grapes are expected to hang through the winter. But in all establishments where Grapes are the order of every day in the year, the borders of the very early and the very late houses should be inside. I believe in inside borders, and especially for the queen of all Grapes, the Muscat of Alexandria, Escholata, &c., which if they are to be had in perfection must hang for months after they are what might be called ripe. These glorious Grapes, and indeed all our fine late Grapes, should be ripened early if they are expected to keep well. They take so long to ripen that they must be got to work early. It is a bad practice to attempt to keep them back. I should like to see them all at work by the middle of January or at latest the beginning

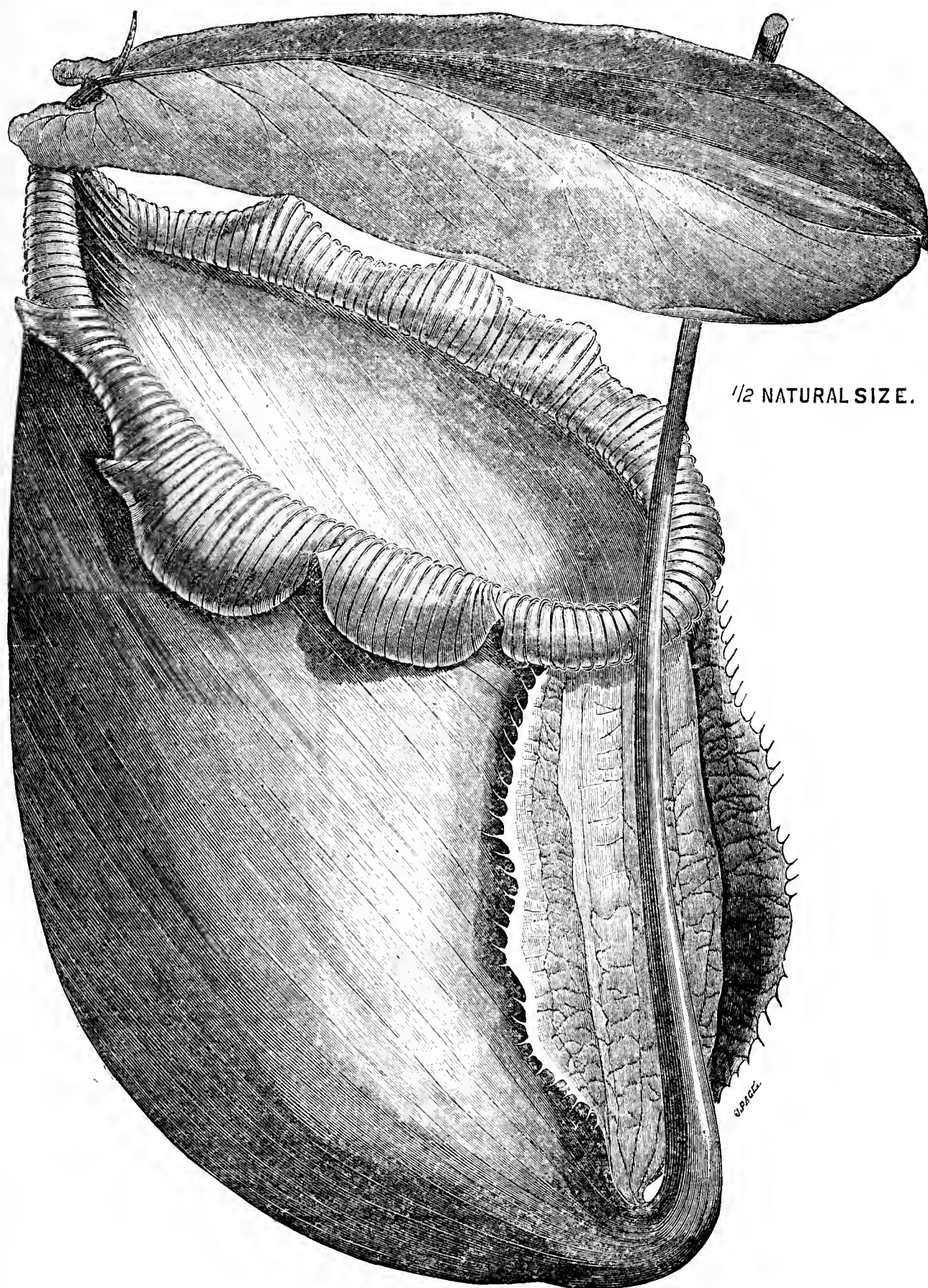
of February. To have to resort to extra firing during the summer and autumn means thrips and spider, and all their concomitant evils. — HENRY ECKFORD, *Boreatton Park, Baschurch.*

NEPENTHES RAJAH.

WE are indebted to Messrs. Veitch & Sons, of Chelsea, for the use of the figure here introduced of what is assuredly one of the finest of the known Pitcher plants. It is, indeed, probably the grandest of them all, and is one of the most striking vegetable productions hitherto discovered, as remarkable in its way as the *Rafflesia Arnoldi*, another Eastern vegetable wonder, the *Nepenthes* now under notice being a native of Borneo, and hence selected to bear the title of Rajah Brooke, of whose services to science in its native place it thus becomes commemorative amongst botanists.

Like the other species of this genus, *N. Rajah* is a plant of erect subscandent habit, the stout stem reaching in its wild state a height of four feet. The leaves are from one to two feet long, oblong-lanceolate, smooth on the surface, very leathery in texture, and having the nerves indistinct. The broad ampullaceous pitcher is six inches in diameter, and a foot in length, furnished with two fimbriated wings in front, covered with long rusty hairs above, and studded with glands within. The recurved margin of the pitcher is one and a half to two inches broad, scalloped into bold undulations, and the lid is suborbicular, ten inches long and eight inches broad. The flowers, which as in the other species are individually not very conspicuous, are produced in racemes two feet long.

The plant, as we have said, is a native of the island of Borneo, where it is found on Mount Kina Balon at an elevation of 5,000 feet. It has been introduced to this country by the Messrs. Veitch & Sons, who have exhibited young plants, and thus shown that it is amenable to cultivation. The plants thus exhibited were awarded a First-class Certificate by the Royal Horticultural Society. It may be grown with every facility in a moist stove, where other forms of this genus, now becoming numerous both in the shape of species and varieties, can be successfully cultivated.—T. MOORE.



NEPENTHES RAJAH.

TOMATOS : CROPPING AND FEEDING.

IT has long since been impressed on me that to grow good large Tomatos in abundance it is necessary to give the plants very liberal treatment. To begin with, we allow good strong loam well enriched, such as one would supply to melons. We allow

only the main stem to grow as far as space will permit, and during the season from 12 ft. to 18 ft. may be reached. The young lateral growths are not allowed to extend, but are rubbed off as soon as they are perceived. The fruit may be thinned out to from three to six in

each bunch, but if quantity is desired a dozen or more per bunch may be left, for some prefer small fruits to large ones, especially when they are used at dessert, and for this purpose they are every season becoming more popular. I have no doubt that when a taste is acquired for them in their raw state, they will compete fairly with melons, figs, and other fruits.

I have grown a dozen or more kinds for comparison, but for productiveness none surpasses the *Old Red* and *Orangefield*. *Acme*, some seeds of which I had from America, appears to be similar to the kind which has done so well at Clovenford and Drumlanrig; at both places I have seen them in the highest excellence. This kind, taking all points into consideration, ranks the first in favour. Our plants, which have been in bearing since the end of June, are still doing well, and quantities are being gathered from them daily. *Hathaway's Excelsior* is very handsome, being of a magenta colour; it is, however, more liable to disease than some of the kinds. We planted in a new range of vineries and peacheries something over 100 strong plants, and had we been growing for market (which we were not) I feel sure no crop of grapes would have paid so well as the Tomatos. We proved this when we were obliged to grow for sale; at that time we published our experience and its results. Then one well-known grower near London assured us that he was induced to try the experiment of Tomato growing *versus* "super-numerary" Vines, for crops to realise the best returns, and the former was vastly more profitable. We have supernumerary Vines expected to fruit well next year, which have not been interfered with in any respect by the Tomatos, though now the latter are a little shaded by the Vines, but as an abundance of fruit is set we expect good supplies for weeks to come. In the peach-houses the Tomatos (Oct. 7) are unmolested, and are setting and ripening as freely as ever.

We find that the Tomato, like the Potato, is an air-loving plant, and when forced abundance of air should be admitted daily. We have two span-roofed houses planted for winter supply in which Tomatos are growing. In one, along with the first batch of French Beans, which are being brought on slowly,

where air has seldom been entirely off night or day, the plants are doing better and bearing more freely than those in company with cucumbers, which are kept closer and at a higher temperature.

We find Tomatos delight in frequent (say three or four times during the season) applications of Thomson's Vine Manure. We have also applied this favourite fertiliser to cucumbers, melons, celery, chillies, &c., with the best results.—M. TEMPLE, *Falkirk*.

GOLD-LACED POLYANTHUSES.

IN the early part of the summer I planted out what few plants of named varieties I had remaining, on a well-prepared border under a north house, and I am happy to say they did well; I scarcely lost a plant, and indeed any diminution of my stock was due more to the ravages of cats than any other cause. I have bought in this autumn a few plants of such varieties as Lancer, Prince Regent, Formosa, &c., and instead of potting all of them as heretofore, I have planted them out on my north border. A few have been potted up, but they have stood out in the open air, and are rooting nicely. Those planted out will remain there all the winter for the execution of orders, and they will have a little litter thrown over them in bitter weather.

I am certain that the losses among Gold-laced Polyanthuses, which we have frequently to deplore in spring, arise from keeping them too dry during the winter. I know one leading grower in the north who stands his potted plants out of doors all the winter, exposed to all weathers, and he has but few losses. I find that the potted plants which die in spring generally appear to have done so from dry rot; and they show scarcely any trace of having thrown out fresh roots at the collar. But all my plants that are fully exposed are doing this, and I am hopeful they will make good balls of roots.

The conclusion that I have come to is, that while it may be well to keep Auriculas pretty dry in winter, such a course of treatment does not suit the laced Polyanthus. And they are impatient of a dry atmosphere also, therefore it is better to fully expose the plants, leaving them to the tender mercies of Mother Nature, than to risk almost certain loss by keeping them too dry both at the leaves and roots.—R. DEAN, *Ealing, W.*



W. H. Fitch del.

Peach Golden Eagle.

Chromolith. G. Severeys Brussels.

GOLDEN EAGLE PEACH.

[PLATE 598.]

WE have here one of the famous series of first-class Peaches, which we owe to the late Mr. Thomas Rivers, and which has greatly increased the variety and extended the season of high quality varieties of this luscious fruit. The accompanying figure represents that named the GOLDEN EAGLE, and has been prepared from fruit kindly supplied to us by Mr. T. F. Rivers, from the Sawbridgeworth collection.

It is a seedling of the second generation from Crawford's Late, the fruit being of large size, ripening at the end of September or beginning of October, and having a rich piquant flavour. That it is a very handsome fruit, and most desirable as an acquisition for the dessert table, our present figure sufficiently

attests. In its outline the Golden Eagle is round, very slightly depressed at the apex, with a deep and well-marked suture. The skin is of a golden yellow heavily flushed with crimson where exposed to sun and light with a pale yellow, almost lemon-coloured flesh, which is juicy melting and richly flavoured; and has a slight tint of red next the stone.

Mr. Rivers states that the fruits borne by pot-grown trees sometimes measure as much as ten inches round; and he very significantly adds: "For some years the difficulty of cultivating peach and nectarine trees on walls in the open air has been almost insuperable in most parts of England; under glass their culture is interesting and profitable."

REGISTER OF NOVELTIES.

NEW PLANTS.

AERIDES LAWRENCEÆ, *Rehb. f. (Gard. Chron., N.S., xx., 460).*—A grand new epiphyte related to *A. odoratum*, and in its habit of growth comparable to a large form of *A. quinquevulnerum*. The flower racemes are two feet long, and bear upwards of thirty of the lovely blossoms, which are nearly as large as those of *A. crispum*; the dorsal sepal is cuneate oblong, the lateral ones broader, the petals cuneate ligulate, all obtuse, white changing to yellowish, and tipped with rosy purple; the lip has its side-lobes high, oblong-dolabriform, and its central lobe tipped with rosy purple, two purple lines running back to the mouth of the spur, which is conical, acute, incurved. The original plant of this species was sold by auction for 235 guineas. Tropical Asia; Sir Trevor Lawrence, Bart.

ASTER DIPLOSTEPHIODES, *Bentham (Bot. Mag., t. 6718).*—A fine hardy perennial, sometimes referred to *Heterochaeta* or *Diplopappus*. It has a stout rootstock, simple stems a foot or more in height, obovate or oblanceolate leaves 2—4 inches long, and solitary heads 2—3 inches in diameter of pale bright purple ligulate ray florets surrounding a darker purple disk; blooms freely in May and June; Himalayas; H. J. Elwes, and Kew.

CATTLEYA TRIANÆ FORMOSA, *Williams (Orchid Album, t. 108).*—One of the finest of the many handsome forms of *C. Trianae*, remarkable for the large size, the excellent form and the stout substance of its flowers, which have blush sepals and petals, and a broadly expanded undulated lip, the whole front lobe of which is of a rich magenta purple with an orange-coloured throat and disk; Colombia; B. S. Williams.

CRINUM ORNATUM, *Hort. Bull.*—An extremely handsome bulbous plant said to be similar to, if not identical with the new *C. Kirkii*. The plant shown bore two erect flower stems, each carrying a many-flowered umbel, one with fourteen, the other with twelve flowers. They are large, white, with a broad medial stripe of crimson-red; 1st-class Certificate R.H.S., Oct. 9; W. Bull.

JASMINUM FLORIDUM, *Bunge (Bot. Mag., t. 6719).*—A fine hardy or nearly hardy yellow-flowered Jas-

mine, grown some years since under the name of *J. subulatum*. It is an evergreen shrub of bushy or subscandent habit, with trifoliate rarely pinnate leaves, and numerous cymes of yellow flowers producing abundantly during the summer months. It grows freely on a south wall at Kew without protection; native of China and Japan.

KNIPHOFIA LEICHTLINII, *Baker (Bot. Mag., t. 6716).*—A rather pretty stemless species with a tuft of tapering triquetrous leaves springing from the crown, bright green, and reaching the length of four feet. The scape is 1—2 feet high, and bears a spike three to four inches long of narrowly bell-shaped flowers, which are yellow on the shaded, and of a dull pale vermilion on the exposed side; flowers in September; Abyssinia; Max Leichtlin, and Kew.

LÆLIA WYATTIANA, *Rehb. f. (Gard. Chron., N.S., xx., 426).*—A lovely Orchid imported with a batch of short-bulbed *L. purpurata*, and probably a natural hybrid. The flowers are as large as those of *L. crispata*, with the sepals and the very acute petals white, the lip having the general shape of *crispata*, rhomboidal with the apical part undulated; the lateral lobes are of a light yellow outside, the front lobe is of a fine light purple, the veins of the disk dark purple, the central ones being coloured their whole length, while the outer ones are coloured only at their base; probably from Brazil; F. Sander.

MASDEVALLIA HARRYANA ATROSANGUINEA, *Williams (Orchid Album, t. 105).*—A highly-coloured form of this extremely popular Orchid. The habit of growth is that of the type, but the flowers are of a strikingly handsome glowing tint of crimson flushed with magenta, which contrasting with the orange yellow of the tube, is very charming; New Grenada; R. Warner, Esq.

MASDEVALLIA HARRYANA MINIATA, *Williams & Moore (Orchid Album, t. 110).*—A splendid variety of this beautiful cool-house Orchid, with the general habit and aspect of the type, but with the flowers of a bright vermillion-red flushed with scarlet, and an orange yellow tube, which forms a yellow eye to the flower; bright and beautiful; New Grenada; W. Lec, Esq.

MEDINILLA CURTISII, *Hort. Veitch.*—A very free blooming and elegant plant, likely to be useful

for general cultivation. The plant forms a low much branched bush, with opposite leaves, which are sessile ovate acuminate, and deep green. The flowers grow in cymes, which are both axillary and terminal, and are very abundant, small, white; 1st-class Certificate R.H.S., Oct. 9; Sumatra; Veitch & Sons.

ONCIDIUM PAPILIO ECKHARDTII, *L. Linden* (*L'Il-lust. Hort.*, t. 500).—A remarkably fine form of the Butterfly Orchid, remarkable for having flowers much larger than in the ordinary type. The three erect narrow linear sepals are five inches in length, the two lanceolate decurved petals three-fourths of an inch broad, yellow transversely banded with red, and the lip is two and a-half inches in breadth, with a clear yellow centre, and a broad (half-inch) band of bright red round the margin. These flowers, double the normal size, are very striking in appearance; Panama; dedicated to M. Eckhardt-Fould, of Havre.

SALVIA BOLIVIANA, *Planchon* (*Bot. Mag.*, t. 6714).—A very handsome species of *Salvia*, of erect suffrutescent habit, with largish ovate cordate stalked downy leaves, and large panicles consisting of crowded verticillasters of crimson scarlet flowers, about 1½ inch long, with a slender slightly curved tube, and a small bluntly lobed limb; flowers very freely; Bolivian Andes; Messrs. Henderson.

VANDA SANDERIANA, *Rehb. f.* (*Gard. Chron.*, N.S., xviii., 588; xx., 440, fig. 67, 68).—The grandest novelty introduced for years, and a magnificent and worthy companion of *Aërides Lawrencei*. The plant somewhat resembles *V. cœrulea* in its growth, but is of denser stouter habit, and has broader longer leaves. The axillary racemes bear 8—12 flowers which are fully 4½ inches across, and flat, so that in form and size they are very suggestive of those of *Odontoglossum vexillarium*, the upper sepal and the two petals being also of the same blush-pink colour; the lower sepals are considerably larger, tawny or golden yellow, longitudinally and then transversely veined all over with crimson red, the comparatively small lip being dull brownish crimson, recurved, and marked along the centre with three keels. Native country probably Tropical Asia; first flowered by W. Lee, Esq., by whom it was purchased.

NEW FLOWERS.

BEGONIAS (*Tuberous*).—*Madame Grody*, a large double-flowered variety with blossoms of ivory-whiteness, and tinted with lemon-yellow, fine and distinct; 1st-class Certificate R.H.S., August 28; W. Bealby. *Mons. Duvivier*, a very fine double variety, the flowers large and symmetrical, the colour bright glowing crimson; habit compact and good, a decided acquisition to this class; 1st-class Certificate R.H.S., October 9; W. Bealby. *The Queen*, a very large-flowered double variety, rosette shaped, white, shaded with yellow at the base; good habit and very free; 1st-class Certificate R.H.S., September 11; E. Edwards.

BEGONIA, *Novelty*.—A very dwarf-growing hybrid representing a new and distinct race, raised between *B. lineata* and *B. Davisii*, the latter being the seed parent; flowers bright cherry-rose; the leaves handsomely marked; 1st-class Certificate R.H.S., September 11; Veitch & Sons.

BEGONIA, *welltoniensis rubra*.—This, though shown as a seedling from *B. nitida*, has all the characteristics of *B. welltoniensis*, being similar in every respect, except that the flowers are of a deep coral red; H. Eckford.

CARNATIONS.—*Cardinal*, scarlet self; finely formed, very bright, and of great substance; one of the best selfs. *Delicata*, R.F., a very pleasing variety; large, finely formed, smooth, of great substance, and richly marked with delicate rose. *Huson*

Morris, a fancy flower, rich crimson and maroon; full size and finely formed; brilliant. *Ida Mary*, crimson self; rich, smooth, and finely formed. *Mephistophiles*, C.B., a high coloured variety; showy and attractive for the home stage. *Mr. Daniels*, C.B., a seedling from Stanley Hudson, with the definite markings and fine quality of that flower, and a largely increased size. *Mr. Carter*, S.F., a large, well-formed flower; petals very broad, stout, smooth, and broadly marked, with a rich scarlet on a pure white ground. *Mrs. Carter*, R.F., large and full, of excellent substance, and fine form; richly marked with bright rose; a tall grower. *Mrs. Dodwell*, rosy salmon or soft salmon pink self; large, finely formed, smooth, of great substance, and highly refined; one of the finest of the selfs. *Mrs. Pratt*, C.F., a large fine fancy flower, smooth, full, of fine form and great substance; richly flaked with deep crimson. *Saladin*, S.B., a very rich and novel fancy, brilliant scarlet and dense almost black bizarre, on a cream ground. *Saturn*, fancy; flaked and flecked chocolate purple, on a French white or silver grey ground; large, smooth, and very attractive; all from E. S. Dodwell.

CHRYSANTHEMUM, *coronarium Aurora*.—Shown as the Double Yellow Marguerite; a good form of this useful garden annual; 1st-class Certificate R.H.S., August 28; H. Cannell & Son.

CHRYSANTHEMUM (*Japanese*), *Alexander Dufour*.—An early-flowering dwarf and compact growing variety, the florets narrow, prettily reflexed, and of a bright amaranth colour; very cheerful and pleasing, and valuable because of its obvious good qualities; very free indeed; 1st-class Certificate R.H.S., October 9; H. Cannell & Sons.

DAHLIAS (*Show*).—*Lucy Berry*, white, slightly tipped with deep purple, and suffused with pale purple; good outline and floret; Keynes & Co. *Mrs. Cannell*, a pure white self of a promising character; H. Cannell & Sons. *Mrs. W. E. Gladstone*, a beautiful delicate flower of excellent form and substance, white suffused with citron, and delicately tinted with pinkish lilac; Certificated also at the Crystal Palace Dahlia Show under the name of *Mrs. Hurst*; 1st-class Certificate R.H.S., September 11, 1883; C. Turner. *Mrs. W. Hoskins*, a distinct buff self, the reverse lively pink; very pleasing but inclined to be low in the centre; Keynes & Co. *Muriel*, a large yellow self, good outline and floret, likely to be very useful; C. Turner. *Ruby Gem*, a ruby-crimson self; good floret, outline and centre; G. P. Harris. *Statesman*, deep crimson, a self flower of some promise; Keynes & Co.

DAHLIAS (*Fancy*).—*Arabella*, golden buff, striped with orange-red; Keynes & Co. *Duchess of Connaught*, pale yellowish buff, tinged with orange, flaked and striped with rosy purple, fine outline and substance; a sport from James O'Brien; 1st-class Certificate National Dahlia Show, Aug. 31; C. Turner. *Goldfinch*, a sport from Gaiety, deep gold, flushed with pink, flaked with crimson and slightly tipped with white; Keynes & Co. *H. Brown*, bright pale purple, heavily flaked with maroon; Keynes & Co.

DAHLIAS (*Single*).—*B. Barkaway*, orange-crimson flame in the centre of the florets, with margins of deep orange-buff; 1st-class Certificate R.H.S., Aug. 28; T. S. Ware. *Beacon*, rich crimson, very fine; T. S. Ware. *Beauty of Uplands*, pale red, tipped with yellow; T. S. Ware. *Bedding Gem*, pale orange scarlet, a small flowered variety; 1st-class Certificate R.H.S., Aug. 28; T. S. Ware. *Cetewayo*, rich deep shining maroon, very fine; 1st-class Certificate R.H.S., Aug. 28; T. S. Ware. *Cherry*, ruby red edged with purplish lilac; T. S. Ware. *Dr. Moffatt*, in the way of Paragon, but larger, and with more defined colours, and broad

well-formed florets; 1st-class Certificate R.H.S., Sept. 11; T. S. Ware. *Freedom*, deep bright orange-scarlet; a useful small flowered type; T. S. Ware. *George Clarke*, maroon, with side margins of magenta, distinct and pleasing; T. S. Ware. *Highland Chief*, buff, brown and pink, very distinct; T. S. Ware. *H. W. Pettitt*, crimson, with edging of delicate lilac; T. S. Ware. *In Memoriam*, magenta, with dashes of crimson maroon; T. S. Ware. *Lucy Goldworth Fish*, very distinct and beautiful, the florets white with a bar or edging of scarlet on each margin, and forming a very charming flower; D. T. Fish. *Marchioness of Westminster*, pure white, very fine form; the best white yet raised; 1st-class Certificate R.H.S., Sept. 11; C. Turner. *Midget*, a small flowered variety of a vivid scarlet colour, good habit, and very free; 1st-class Certificate R.H.S., Aug. 28; H. Cannell. *Mrs. Bowman*, magenta purple, distinct in colour, fine shape, and very pleasing; 1st-class Certificate National Dahlia Show, Aug. 31; Saltmarsh & Son. *Mrs. Burbidge*, deep purple, very distinct; T. S. Ware. *Mrs. Castle*, intense lake, with slight tips of magenta; T. S. Ware. *Negress*, a finely formed deep black maroon variety, shining surface, distinct and good; 1st-class Certificate R.H.S., Aug. 28; T. S. Ware. *Silver King*, orange cinnamon, distinctly edged with pale yellow; T. S. Ware. *Victory*, seedling from White Queen, pure, stout, and well formed; T. S. Ware.

GLADIOLUS.—*Duke of Edinburgh*, salmon-rose, slightly flaked with purple; white throat; very fine and striking. *Lady Cavendish*, lilac-pink, flaked with bright rosy-purple; very fine form and grand spike. *Sir Trevor Lawrence*, pale orange scarlet, but very bright, the throat flaked with purple; extra fine; 1st-class Certificates to each of the foregoing, R.H.S., Aug. 28; Kelway & Son.

GLOXINIA, *Alabaster*.—A very fine variety, pure satiny white, large in size and extra fine in form; 1st-class Certificate R.H.S., Aug. 28; C. Bennett.

IBERIS, *Empress*.—A very fine white annual Candytuft, with large rocket-like trusses of flower of the purest white; distinct; 1st-class Certificate R.H.S., Aug. 28; Biddles & Co.

PENTSTEMONS.—*Cerise Queen*, brilliant carmine cerise, the throat white; large, and of fine form. *Purple Queen*, bright violet purple, with a white throat marked with lines of pale purple; fine spike; 1st-class Certificate to each, R.H.S., Sept. 11; M. Victor Lemoine.

PELARGONIUM (zonal bedding), *Dr. Orton*.—A good bedding variety, of very close and compact habit, free-flowering; the trusses large, holding on well; individual flowers large, of good form, intense crimson-scarlet; 1st-class Certificate R.H.S., Chiswick, Aug. 23; J. Pearson.

PELARGONIUM (zonal), *White Perfection*.—A variety of vigorous growth adapted for pot culture; the trusses of medium size, freely produced; individual flowers large, of fine rounded form, pure white; 1st-class Certificate R.H.S., Chiswick, Aug. 23; H. Eckford.

PICOTEEES.—*Ada Hannah*, H.S., a highly refined flower of good substance; petal broad and smooth, and colour evenly laid upon the margin. *Esther Minnie*, H.R.O., a seedling from Fanny Helen, having all the fine qualities of the parent, with double its fulness, and a largely increased size; colour, bright rose pink, on a ground of perfect purity. *L'Elegant*, L.S., wire-edged salmon scarlet; a seedling from Ann Lord, repeating its parent in all save colour. *Purple Prince*, H.P., a broad-edged seedling from Zerlina, set with pollen from Medina; it has the grand white, and substance of the former, with the rich colour and breadth of the latter, and but for a tendency in a cool humid season like the past to throw its colour in spots, beyond the margin of the

petal, it would, unquestionably, hold the first place among the broad, heavy edged. The fault is not likely to recur in a warm, genial season; but in any case it is worth growing for its effect on the home stage; all from E. S. Dodwell.

RHODODENDRON, *Brilliant*.—A remarkably fine variety of the javanicum race; with large brilliant scarlet flowers, deepening to orange-red; 1st-class Certificate R.H.S., Sept. 11; Veitch & Sons.

SWEET PEAS.—*Blue Edge*, a very showy variety, having the standards very light rose; and the wings white, with distinct edge of blue. Very showy and effective; Carter & Co. *Invincible Carmine*, a very fine self-coloured carmine variety; flowers very large and of good substance; T. Laxton. *Invincible Striped*, a very distinct and pretty variety; very lively carmine, boldly striped; Carter & Co. *New Carmine Rose*, a very pleasing and distinct variety both as regards growth and colour of flowers, and well worth cultivation; it was certificated at South Kensington on August 14, and the committee now confirmed the Certificate; Hurst & Son. *Orange Prince*, flowers very large, of a beautiful shade of salmon-pink, very distinct and pretty; H. Eckford. Each of the foregoing was awarded a 1st-class Certificate R.H.S., Chiswick, Aug. 23.

TYDEAS.—*Æsculapius*, flowers of medium size, the tubes bright scarlet, richly spotted and veined. *Harlequin*, plant somewhat tall; the flowers large, the tube shaded with magenta and veined and dotted with purple. *Podalire*, flowers of medium size, the tubes of a pleasing cherry-red veined and speckled with purple; showy. *Robert le Diable*, flowers very large, freely produced, of a most intense, almost black, crimson; distinct and showy. *Venosa*, plant tall, the tubes bright carmine-magenta shaded, beautifully veined and dotted with purple. Each awarded a 1st-class Certificate R.H.S., Chiswick, Aug. 23.

VERBENAS.—*Beethoven*, dwarf habit, remarkably free flowering; trusses and pips of large size, of a deep rosy lake colour; an excellent bedding variety. *Faust*, habit very close, very free flowering; the trusses large, individual flowers large, of a very rich fiery carmine; very pretty. *Marion Baker*, close compact growth; the trusses of medium size, the pips large, with white eye, light rosy carmine; a very pretty shade of colour. *R. F. Schule*, good dwarf habit, very free flowering; trusses and individual flowers large, of a fine warm rosy-pink, with white eye. *Swanley Gem*, fine compact habit; the trusses and pips very large; white, shaded and edged with pale blue; very effective. All from H. Cannell & Sons; and all 1st-class Certificates R.H.S., Chiswick, Aug. 23.

NEW VEGETABLES.

ONION, *White Globe*.—Bulbs medium size, of a true globular shape, remarkably firm and solid, with a very white silvery skin; very handsome and distinct; 1st-class Certificate R.H.S., Chiswick, Aug. 30; MM. Vilmorin.

POTATOS.—*Beauty of Eydon*, a fine large oblong white kidney, in the way of Woodstock Kidney; very handsome, of excellent quality, and a good cropper; 1st-class Certificate R.H.S., Chiswick, and International Potato Show, Sept. 13; Jos. Hughes, Eydon Park. *Cardinal*, a handsome broad flat Potato, a fine cropper, and of high class table quality; from the American Rose crossed with Bountiful; 1st-class Certificate, International Potato Show, Sept. 13; R. Dean. *Clarke's Maincrop*, an early sort of the Magnum Bonum type; a great cropper, and of fine quality; 1st-class Certificate R.H.S., Chiswick; Mr. Clarke. *Desideratum*, a long kidney with dull fawn-coloured skin, a moderate cropper, of extra fine quality; 1st-class Certificate

R.H.S., Chiswick; W. Smith. *Edgecote Purple*, said to be a seedling from Purple Ashleaf, a good cropper, and of excellent table quality; 1st-class Certificate, International Potato Show, Sept. 13; C. R. Wills, Banbury. *Hughes' Prolific*, of the same type as the Beauty of Eydon, and of equal good quality; both are said to have been raised from Beauty of Hebron crossed with Myatt's Ashleaf; 1st-class Certificate, International Potato Show, Sept. 13; J. Hughes. *Midsummer Kidney*, very early, ripens even earlier than the Ashleaf, a large cropper, very handsome and of excellent quality; raised from the American Success crossed with Woodstock Kidney; 1st-class Certificate R.H.S., Chiswick, and International Potato Show, Sept. 13; R. Dean. *Prime Minister*, a seedling from Magnum Bonum and Woodstock Kidney, a large flattish oval round with a netted skin: a great cropper, and of high class quality; 1st-class Certificate, International Potato Show, Sept. 13; R. Dean. *Snowdrop*, a variety somewhat resembling Snowflake, but firmer in texture and of better flavour and quality; an extraordinary cropper; 1st-class Certificate R.H.S., Chiswick; Mr. Perkins. *The Dean*, a greatly improved Vicar of Laleham, from which it is a seedling, of excellent quality and a capital cropper; it is a very handsome deep purple-skinned round; 1st-class Certificate, International Potato Show, Sept. 13; R. Dean. *Welford Park Kidney*, a seedling from Woodstock Kidney, handsome, of fine quality and a heavy cropper; 1st-class Certificate R.H.S., Chiswick, and International Potato Show, Sept. 13; C. Ross, Welford Park.

TOMATOS.—*Chiswick Red*, a selection from General Garfield; fruits medium-sized, obovate, smooth, deep red; very productive; 1st-class Certificate R.H.S., Chiswick; The Society. *Improved Large Orange*, fruits large, round, smooth, deep orange-yellow in colour; very handsome; 1st-class Certificate R.H.S., Chiswick; Mr. Henderson.

TURNIP, *Extra Early Milan*.—A valuable addition to our garden turnips, as it is much earlier than the Extra Early Munich, and of finer quality; the bulbs are round and flattened, deep rosy purple on the upper side, and with a very slender tap root; the leaves are strap-shaped and rather short, and the growth is very compact; 1st-Class Certificate R.H.S., June 12; Veitch & Sons.

NEW PUBLICATIONS.

The GARDENERS' CHRONICLE (Sept. 22—Oct. 20) contains descriptions of the following plants:—*Sigmatostalix malleifera*, Rehb. f. (p. 360), a curious little Orchidaceous gem, with oblong pseudobulbs $1\frac{1}{2}$ inch high, linear ligulate leaves, and slender peduncles bearing yellow flowers, the sepals and petals with transverse bars and spots of sepia brown, and the lip parted into three narrow segments, and bearing a hammer-like callus; New Grenada; F. Sander.—*Masdevallia trichate*, Rehb. f. (p. 360), a pretty plant in the way of *M. trigloch*, but with longer linear lanceolate leaves and smaller flowers of a richer brown purple with orange tails, some parts of the base being also orange-coloured with brown nerves; Dr. Wallace.—*Masdevallia Reichenbachiana auranziaca*, Rehb. f. (p. 360), a beautiful variety in which the lateral sepals are rich orange instead of purple brown; F. Sander.—*Zygopetalum forcipatum*, Rehb. f. (p. 360), a curious epiphyte allied to *Z. gramineum*, with whitish ochre-coloured flowers having a broad roundish lip fringed in front, and marked with two brick-red blotches on each side the callus, and by a few purple spots in the front portion; Shuttleworth & Carder.—*Cattleya labiata Warneri*, Hort. (p. 372, fig. 57), a good illustration of a full-sized flower of this fine variety of *C. labiata*—*Statice Suworowii*, Regel (p. 392, fig. 59), a pretty

greenhouse or half-hardy annual, with oblong run-cinate leaves, dense spikes of small pale rosy-lilac flowers, which are either single 15—18 inches high, or with several shorter branching spikes growing out from the base; W. Turkestan; Haage & Schmidt.—*Vanda insignis Schroderiana*, Rehb. f. (p. 392), a beautiful variety, with the sepals and petals light yellow, with light orange blotches, and the lip cream-coloured with two orange lines.—*Maxillaria varicosa*, Rehb. f. (p. 392), a stout growing species, with fusiform pseudobulbs, oblong-ligulate leaves, and three-flowered racemes of flowers in the way of those of *M. corrugata*; Bolivia; T. Christy.—*Gentiana ornata*, Wallich (p. 396, fig. 60), a charming little trailing perennial, with oblong-lanceolate glabrous leaves, and tubular funnel-shaped dark blue flowers, with a stellately spreading calyx; Eastern and Central Himalaya; G. F. Wilson.—*Corynocarpus laevigata*, Forster (p. 396, fig. 61), an evergreen greenhouse shrub, with large oblong glossy leaves, and white flowers succeeded by olive-shaped berries; New Zealand; fruited at Tresco Abbey, Scilly Isles.—*Lalia Wyattiana*, Rehb. f. (p. 426), a beautiful Orchid, supposed to be a wild hybrid, and imported with a quantity of the short-bulbed *L. purpurata*, with flowers as large as those of *L. crispa*, having white sepals and petals, and a slightly undulated light purple lip with dark purple veins over the disk; Brazil; G. Neville Wyatt, Esq.—*Pteris serrulata Pocockii*, Moore (p. 426), an elegant variety of this useful evergreen greenhouse fern; it is of slender habit, with long-pinnuled drooping segments which are all developed at the apex into a shortish dense tasselled tuft, which gives to the plant its drooping character, and is its principal characteristic; a garden variety raised by Mr. C. Pocock, Wincanton.—*Vanda Sanderiana*, Rehb. f. (p. 440, figs. 67, 68), the grandest novelty introduced for many a year, of vigorous stocky growth, with recurved distichous leaves, and flowers 4—4½ inches across, having the three upper segments bluish, the two lower sepals very large yellowish veined all over with crimson, and the small lip dull brownish crimson; Tropical Asia; W. Lee, Esq.—*Masdevallia infracta purpurea*, Rehb. f. (p. 460), a variety with larger flowers than the type, of the brightest purple mauve; Sir T. Lawrence.—*Aërides Lawrencei*, Rehb. f. (p. 460), a grand and unique species, allied to *A. odoratum*, but having flowers nearly as large as those of *A. crispum*; it bears a long raceme of flowers which are white tipped with purple, the middle lobe of the lip also purple with two purple lines running back to the mouth of the spur; the finest of all the known species; Tropical Asia; Sir Tr. Lawrence.—*Masdevallia racemosa*, Lindl. (p. 466), a charming species, with broad lanceolate long-tailed leaves, and racemes of 4—14 fine flowers which appear to be of a bright yellowish orange colour, or very delicate orange red; Cordillera of Western South America; Veitch & Sons.—*Dendrobium polycarpum*, Rehb. f. (p. 492), a species allied to *D. Mirbelianum* and *D. Rimauni*, with shining stems 3 feet long, and flowers in lax racemes, yellowish with purple-red side lobes to the lip; Sonda Isles; Veitch & Sons.—*Cattleya Brymeriana*, a fine novelty in habit like a short-bulbed *Lalia elegans*, the flowers have the sepals and petals rosy-purple, the lip unusually broad with the middle lobe projecting, obcordate, the central area orange with a broad line running out to the base, the margins of the side lobes, and of the middle lobe in front of the origin is of the warmest purple-mauve, very beautiful; Low & Co.—*Pyrus pinnatifida*, Ehrhart (p. 492, fig. 78), a handsome small tree with oblong pinnately cut leaves, and corymbose clusters of white flowers, succeeded by scarlet berries; well-known in collections.

The BOTANICAL MAGAZINE for October contains

figures of *Salvia boliviana*, Planch. [t. 6714], a beautiful free-flowering species, of erect subshrubby habit, with rather large ovate-cordate wrinkled pubescent leaves, and panicles two feet long, of crowded whorls of bright scarlet slender tubed flowers having a small two-lipped limb; Bolivian Andes; Henderson & Son. — *Dendrobium cariniferum Wattii*, Hook. f. [t. 6715], a small white flowered Dendrobe of little beauty; Burmah; Kew. — *Kniphofia Leichtlinii*, Baker [t. 6716], an interesting half-hardy perennial, stemless, with long carinate subtriquetrous bright green leaves, and a scape a foot and a half high, bearing a cylindrical spike of narrowly bell-shaped flowers which are yellow flushed with dull pale vermillion; Abyssinia; Max Leichtlin; Kew. — *Glyphosperma Palmeri*, S. Wats. [t. 6717], a new Liliaceous genus allied to *Anthericum*, with fistulose leaves and straggling racemes of small greenish white flowers, of no floricultural value; N. Mexico; Kew. — *Aster diplostephioides*, Benth. [t. 6718], "the handsomest and one of the commonest of the Alpine Compositæ of the Himalaya," a pubescent or villous perennial, with obovate to oblanceolate stalked radical leaves, and solitary flower-heads 2—3 inches in diameter, having a pale bright purple ray of numerous narrow florets surrounding a dark disk; Kew. — *Jasminum floridum*, Bunge [t. 6719], the same as the *J. subulatum*, Lindl., a suberect shrub, with trifoliate leaves, and cymose heads of moderate-sized yellow flowers; China and Japan; Kew.

L'ILLUSTRATION HORTICOLE (9, 10 liv.) gives figures of *Pothos celatocalyx*, N. E. Brown [t. 496], an interesting Aroid, with two ranked imbricating roundish leaves growing against a flat surface, no doubt eventually producing different and more perfect leaves; Borneo; Veitch & Sons. — *Odontoglossum Londesboroughianum*, Rehb. f. [t. 497], a fine showy Orchid, with yellow flowers, the sepals and petals banded with brown, and the large flat lip pure yellow; Mexico. — *Campylobotrys Ghiesbreghtii fol. variegatis* [t. 498], a singularly variegated stove plant, well known in gardens. — *Calamus Lindenii*, Rodigas [t. 499], an elegant dwarf palm, with spiny stems, and ovate pinnately cut leaves, which are dark-green above, and white beneath; Malay Archipelago; Compagnie Continentale d'Horticulture. — *Oncidium Papilio Eckhardti*, L. Lind. [t. 500], a very handsomely marked large flowered variety of the Butterfly Orchid; Comp. Cont. d'Horticulture. — *Anæctochilus Lowii*, Hort. [t. 501], a well-known dwarf Orchid with the leaves handsomely reticulated with metallic-tinted lines on a velvety surface.

REVUE DE L'HORTICULTURE BELGE, &c., has a handsome figure of a fine deep maroon crimson H.P. Rose, raised by J. Schwartz, and named *Président Sénélar*, which has obtained a first-class award at the June meeting of the Société d'Horticulture pratique de Rhône.

JOURNAL DES ROSES (Oct.) gives a portrait of the *Tea Rose Etandard de Jeanne d'Arc*, a variety raised by M. Garçon, of Rouen, and having creamy-white flowers with remarkably smooth petals, the colour passing to pure white.

GARTENFLORA (Sept.) has figures of a double flowered form of *Calendula sicula fl. pl.* [t. 1128], which bears flower-beads about an inch across, and is introduced by Damman & Co., who call it *C. maritima fl. pl.*, and describe it as a perennial of bushy habit, very free-flowering, blooming within two months of its being sown, and resembling the officinalis forms, but smaller and much handsomer; the flowers are sulphur yellow. — *Opuntia Poeppigii*, Otto, and *O. Segethi*, Philippi [t. 1129], two small Chilean Cacti, the first with white, the second with rosy-tinted flowers; Haage et Schmidt. — *Chamelum luteum*, Philippi [t. 1129, fig. 6—9], a very dwarf yellow-flowered Irid, with linear filiform leaves, and small erect funnel-shaped flowers about two inches long.

REVUE HORTICOLE (Oct. 1—16) figures *Moninia obtusifolia*, a purple and orange flowered Polygalaceous shrub from Peru and New Grenada, and *Caraguata sanguinea*, a Bromeliad with white flowers nestled in the rosy bracteal leaves.

BULLETIN D'ARBORICULTURE, &c. (Sept.—Oct.) contains a plate of the *Amsden Peach*, the text of which had been already presented, while that of the Pear Olivier de Serres is now given; and also a plate of the *Citron des Carmes Pear*, one of the earliest varieties in cultivation.

TREATMENT OF IMPORTED CYCADS.

BUT few tribes of plants have enjoyed more of the favour of gardeners and garden amateurs than the Cycads in their manifold beautiful aspects, which form such stately ornaments to our conservatories and winter gardens. Notwithstanding, however, that there are abundant importations, and the plants are in demand at high prices, those existing in our houses bear no proportion to the number imported, since a very large percentage of these stems perish in consequence of the treatment to which they are subjected.

In order to keep the imported plants, which are often costly, as large as possible, it is customary to plant the stems as received. The consequence of this is, that (1) almost always the first young growth appears before the striking of the root; that (2) the roots appear very late, often not till after a year has passed, and then but scantily; and that (3) the stems frequently rot in consequence of the injuries they have received when being collected and sent home.

Newly imported Cycads ought therefore to be thus treated:—First a thick slice should be sawn off the root end of the trunk. If sound, it will be well. In many cases, however, it will be found that there is a hollow caused by decay passing up the trunk, and should there be so, slice after slice should be cut away till the last trace of this rotteness disappears. They are then to be potted or tubbed in vessels half as deep, as broad, and somewhat larger than the stems to be planted in them. In the bottom should be put a layer of coarse charcoal for drainage, then a moderately thick layer of very nutritious palm soil, on that a sandy layer mixed with charcoal, and on this, if need be, coarsely pulverised charcoal. On the latter, the stem, having had the saw wound cut smoothly, should be

carefully set, and the vacant space between the stem and the edge of the vessel very closely crammed with charcoal. About three stakes should be set in firmly close to the stem, at about equal distances apart, in order to keep it steady in its new position.

The pots or tubs are next to be put on a hotbed or in a warm house, and kept there until the first shoot is perfected. One can then be certain that a vigorous supply of roots will have been developed. The young roots gather strength from the strong nourishment at the bottom of the pot; and the next shoot, which with good treatment always appears in the following year, bears no trace of the operation performed on the plant. With this treatment a stem never perishes.

I have often cut away the stems so far that only a bulbiform head remained with the heart. In these cases the rooting and the evolution of the shoot was always accelerated, and the growth without exception found to be most vigorous. The reason that the nearer to the heart one makes the cut, the quicker and stronger will be the growth, is evidently because the parts of the young stem are better adapted and more disposed to form roots than the older parts. Indeed, after about four weeks one can observe a callose ring forming on the flat incision, and from this ring, in a short time, numerous plump fleshy roots sink down into the soil.

The portions of the stem which have been removed in the way above explained, when cleared from all decaying matter, are powdered with charcoal, and placed in a hotbed, where they afford a ready means of multiplying the species—a matter which in the case of the newer ones is often of the greatest value.—FRITZ EHRENBERG (*Gartenflora*, 1883, 49).

THE SNOW PLANT.

THE Snow Plant, *Sarcodes sanguinea*, which we figured at p. 58 of our volume for 1881, has been generally thought to be a vegetable parasite; Mrs. R. M. Austin in a letter to Coulton's *Botanical Gazette* gives the following good reasons for holding a different view.

"My attention was first called to the peculiar growth of *Sarcodes sanguinea* as early as 1865 by a plant brought me by my brother, who was working in a hydraulic mine at the time. The underground stem measured 3 feet, and a part was broken off. It is a common saying among the miners that the

roots of the Snow Plant have no end. During the years 1875 and 1876 my attention was more particularly given to the growth of *Sarcodes* to ascertain if it was really a parasitic plant, and from what roots it drew its nourishment. The underground stem is covered with thick fleshy leaves (or scales), and in the axil of each leaf is an undeveloped flower-bud. The stem in the smaller plants extends down only a few inches, while in larger ones it reaches a depth of 3 feet or more. The root consists of a coralline mass, which contains from one to more than 100 cubic inches, according to the age of the plant. I have dug dozens of these plants, and at all seasons of the year, and always found the coralline mass greatest about the time the stems began to appear above ground in early spring. It is gradually absorbed in growing, leaving a honey-combed appearance in the soil. When the growth for the season is completed there only remains about 1 cubic inch of the mass, and just below, and a little to one side of the old underground stem, and attached to the mass of root, is a little Snow Plant. In the spring of 1878 I marked the place of growth of a number of these plants, as I had promised roots of them to Mr. Elwes and friends in the East, who wished to try to grow them. I dug some of these plants in November, after the rains had commenced, and discovered that the root-mass and the little plantlet had greatly increased in size. I dug some of the staked plants early in March, and found them still progressing in growth, and others that were not dug up came up and bloomed by the stakes. My conclusions are that *Sarcodes* is an herbaceous perennial, continuing through many years, and, by the little plantlet always being found below the older one, that it descends a little deeper into the earth each season, and this accounts for the great depth to which some of the underground stems penetrate."

GARDEN GOSSIP.

AT The Kilns, Falkirk, FERN ROOTS are used for GROWING ORCHIDS, as we learn from the *Journal of Horticulture*. Mr. Gair is the possessor of one of the finest and best grown private collections of Orchids either north or south of the Tweed, and his gardener, Mr. Fairbairn, who is one of the most successful of Orchid cultivators was, it appears, the first to demonstrate the superiority of fern roots over peat as a material for growing these plants. Mr. Fairbairn regards the best kind of fibre as that obtained from the surface of those places in the woods where *Lastrea dilatata* grows to the exclusion of everything else. This is cut just like common turf into tough mat-like squares, and after the soil is shaken from it there is left the best, sweetest, and most lasting fibre it is possible to secure—better than peat, better than sphagnum, and often obtainable by those who can secure neither of these. Dendrobiums and other Orchids which require to be kept dry at certain periods, and which are apt to shrivel when grown in sphagnum alone, are said to remain plump when fern fibre is used.

—THE second volume of the re-issue of PAXTON'S FLOWER GARDEN now before us, forms a tome of equal interest and of equal beauty with its predecessor. The greater portion of the subjects illustrated by coloured plates have already appeared in the original edition, two only, the Double White Bouvardia Alfred Neuner, and *Lælia autumnalis atropurpurea* being the novelties

which occur to us. The department of Notes and Memoranda includes a large number of plants of the current period, and these alone give an interest to the volume beyond what it would otherwise possess. The book is handsomely got up, and is just the sort of thing for the drawing-room table in a well-established household where the love of plants and flowers is sustained. The publishers are the Messrs. Cassell & Co., whose taste and public spirit in the production of standard publications is now everywhere known and recognised.

— THE recent publication of a third edition of WILLIAMS' SELECT STOVE AND GREENHOUSE FLOWERING PLANTS is a proof that the taste for the cultivation of indoor ornamental plants is spreading amongst us, a fact which bears evidence to the material prosperity of the country. On the utility of the book just named in its special department of horticulture it is needless to offer any remark, the circumstance of its rapid sale affording sufficient evidence of its value. We may, however, note that Mr. Williams is not a mere compiler of books, but a practical cultivator of great knowledge and experience; and that his endeavour is to impart a due share of this knowledge to those who become readers and students of his various publications.

— THE leaves of ACER REICHENBACHII, as grown by Mr. A. Waterer in his nurseries at Knap Hill, Woking, are exceedingly beautiful when taking on their autumnal hues. They change to a deep crimson-red, varying from that to yellow and brown. The leaves, being large, present a broad mass of colour, which forms a pleasing feature in the landscape, and one that should be taken advantage of by planters. This maple is allied to *A. platanoides*; it is however distinct and very handsome.

— IN the trial of SWEET PEAS at Chiswick, besides certificating several new and desirable kinds (see p. 171) the Floral Committee came to the conclusion that Eckford's Bronze Prince was superior to Invincible Black. They also decided that those named together in the following list were either identical, or too nearly alike to be worth keeping separate:—Princess (Eckford), Butterfly (Benary), and Butterfly (Carter & Co.)—Duchess of Albany (Eckford) and Captain Clark (Benary).—Purple Striped (Carter) and Black Purple (Benary).—Red and White (Benary) and Painted Lady (Carter).—Scarlet Striped (Carter) and Red Striped (Benary).—Emperor (Eckford) and Grandeur (Eckford).—Dark Red (Benary), Scarlet (Carter), and Invincible Scarlet (Benary and Carter).—Black Purple (Benary), Purple (Carter), and Light Blue and Purple (Benary).

— AMONGST the LARGE VINES to be recorded, we are reminded by a note in the *Irish Farmer's Gazette*, of the magnificent BLACK HAMBURGH VINE, which some years ago was the glory of the fine range of vineries in the Viceregal Gardens, Phoenix Park, Dublin. This Vine entirely filled one of the houses, and produced annually some quarter of a ton or more of splendid grapes, and when seen when the fruit was ripe with its extended horizontally trained rods almost mathematically strung on either side with their luscious and sable pendants, it was, in sooth, a sight to admire, being not merely an example of a large vine, but a grand example of high and successful grape culture. Some three or four years since this noble

vine came to grief from a peculiar affection of the bark and wood, and ultimately died, but we learn that its place is filled, and its glories surpassed, by a worthy successor, a more than equally imposing Black Alicante, which already fills a third of the space occupied by its predecessor.

— ONE of the largest examples of the ANTHURIUM ANDREANUM, of which we have as yet heard, is recorded from the garden of J. Marshall, Esq., Belmont, Taunton, where it has been most successfully cultivated by the gardener, Mr. Lucas. In this instance the flower stem was two and a half feet high, and bore a spathe six inches in width and eight and a half inches in length, and of a brilliant scarlet colour. There were eight other such flowers on the same plant. Those who remember the puny samples of *A. Scherzerianum*, first figured in the *Botanical Magazine*, will not be surprised to learn that the present subject goes on improving under good cultivation.

— IN reference to SENECIO MACROPHYLLUS, the *Gardeners' Chronicle* says, of all the members of the enormous family of Composites in flower in the herbaceous collection at Kew this is certainly one of the most handsome. The plant bears glaucous green leaves 2—3 feet in length, and nearly 1½ foot across, and a stout flower-stem about 7 feet in height, bearing a pyramidal panicle of golden-yellow flower-heads. It is sometimes called *Ligularia thyrsiflora*, but there is no doubt that it is identical with *Ligularia macrophylla* = *Senecio macrophyllus*.

— THE usual method of PROPAGATING THE WALNUT is from seed, and it is stated that the varieties usually come true this way, but not always, hence the necessity of resorting to grafting. The Walnut does not, however, graft so readily as many other trees, but it has been found that in the case of one-year-old seedlings grafted in the ordinary way, but close down to the root, and then potted and placed in a close frame in a propagating house, the union is speedily effected.

— FEW ferns are more lovely than the TODEA SUPERBA, but it is usually seen only as a dwarf cushion-like mass, but there is, we understand, in the garden of H. F. Pease, Esq., of Darlington, a specimen of this fern with a clean stem about four feet high, supporting a crown of fifty leaves, and measuring four feet in diameter, the leaves being two feet three inches long. This must be a very charming specimen.

— OF choice IVIES we may recommend *Hedera amurensis*, whose enormous leaves and rapid growth render the plant of great service in clothing unsightly objects, and for covering arbours, &c., quickly. *Hedera palmata aurea*, and *H. aurea spectabilis*, are also good kinds amongst the rapid strong-growing sorts with variegated foliage, their growth being somewhat less vigorous than that of *H. algeriensis* or *H. amurensis*. Amongst Ivies of a dark or purplish hue of foliage there is nothing more effective than *H. atropurpurea*, a comparatively new plant, with exceedingly dark leafage and moderate growth, which make it admirably suitable for low walls; and *H. rhomboidea* is a dark green very close growing kind, the form of whose leaf is very pleasing and distinct.

— THE following notes on the MEDICINAL VALUE OF VEGETABLES, from the *Medical Record*, may serve as useful reminders:—

Asparagus is a strong diuretic, and forms part of the cure for rheumatic patients at such health resorts as Aix-les-Bains. *Sorrel* is cooling, and forms the staple of that *soupe aux herbes* which a French lady will order for herself after a long and tiring journey. *Carrots*, as containing a quantity of sugar, are avoided by some people, while others complain of them as indigestible; it may be remarked, in passing, that it is the yellow core of the carrot that is difficult of digestion, the outer, a red layer, is tender enough; in Savoy the peasants have recourse to an infusion of carrots as a specific for jaundice. The large, sweet *Onion* is very rich in those alkaline elements which counteract the poison of rheumatic gout; if slowly stewed in weak broth, and eaten with a little Nepal pepper, it will be found to be an admirable article of diet for patients of studious and sedentary habits. The stalks of *Cauliflower* have the same sort of value, only too often the stalk of a cauliflower is so ill boiled and unpalatable that few persons would thank you for proposing to them to make part of their meal consist of so uninviting an article. *Turnips*, in the same way, are often thought to be indigestible, and better suited for cows and sheep than for delicate people; but here the fault lies with the cook quite as much as with the root; the cook boils the turnip badly, and then pours butter over it, and the eater of such a dish is sure to be the worse for it. Try a better way.

— THE N. Chinese *CLERODENDRON FOETIDUM*, and the Japanese *C. trichotomum* are the only two members of a large and handsome genus which are hardy in this country. *C. foetidum* was first discovered by Bunge, but the credit of its introduction is due to Robert Fortune. It has large compound corymbs of deep, bright lilac flowers, with dark purple anthers. In the collection of the late G. C. Joad, Esq., at Wimbledon, we (*Gardeners' Chronicle*) saw plants growing freely in the open border, and sending up numerous suckers at some distance from the parent stem, and in our columns, more than twenty years ago, an account is given of plants that had flourished, without protection, for half a dozen years in the open air in the Canterbury nursery of the late Mr. Masters. Now that a love for hardy plants has been so largely developed *C. foetidum* will probably be more commonly grown, as well as *C. trichotomum*, an equally desirable and perfectly hardy shrub.

— THE beautiful *CAMPANULA ISOPHYLLA* is well suited by its habit for planting on a rockery, as well as for a low bed, and in both situations it is most floriferous. The delicate blue flowers are about $1\frac{1}{2}$ inch across, nearly flat, but deeply five-lobed. The white-flowered variety is equally if not more attractive. These are two *Campanulas* which every hardy plant cultivator should possess, and yet they are comparatively scarce, although there is no difficulty in increasing them by means of the young shoots in spring, which root freely in a cold frame.

— TO renew the BARK OF HOLLIES and other subjects which may have been accidentally stripped, and thus to save the life of a valuable tree, A. H., in the *Journal of Horticulture*, recommends grafting. He remarks that, "during a severe winter, some valuable Hollies were so badly

barked that it was feared the whole would die; but, with the exception of one or two, the whole were saved by the following means. Being of considerable girth it was found easy to slit up the bark all round, as in crown grafting, and to insert long young rods, as in crown grafting, only inserting the grafts under the upper bark, as well as that below the base ring. From four to ten shoots were thus inserted according to the room for them round each bared stem, and after being carefully bandaged to exclude the earth, a mound was raised round each to keep out the air. On another occasion a large one in lifting had a large piece of the stem accidentally barked, but by grafting it in the manner described the damage was repaired, and an unsightly wound covered."

— A WELL-MERITED PRESENTATION TO MR. BARRON is one of the episodes of the recent Apple Exhibition. The promoters of the show dined together on October 18, and the opportunity was seized to recognise, in this way, the fact that on Mr. Barron had devolved the heaviest share of the labour attending the show, which must have besides severely taxed all who took a prominent part in it. The gift was a gold watch and chain, the watch bearing the following inscription:—"Presented to Mr. A. F. Barron by a few pomological friends as a souvenir of the Apple Congress, held at the Royal Horticultural Gardens, Chiswick, October 1883."

In Memoriam.

— MERR WILHELM LAUCHE, one of the Royal Gardeners, died at Potsdam on September 12, in his 57th year. He was buried in the Bornstedt churchyard, where also Lenné, Sello, and others lie, the Crown Princess sending an elegant wreath to be laid on his coffin by the Court-gardener, Ernst Sello. A long and appreciative memoir is printed in the *Garten-Zeitung*. His memory will be perpetuated in the handsome gold fern *Gymnogramma Lauchiana*, and in other plants named after him.

— MR. THOMAS GELLATLY, gardener at the Mote Park, Maidstone, died quite suddenly on Oct. 1, aged 48 years. He had been for several years gardener to the Earl of Wemyss, at Gosford, East Lothian, and had only left that place about two months to take charge of the gardens at Mote Park, the residence of Lady Howard de Walden.

— MR. HENRY HOOPER, of the Vine Nursery, Widcombe Hill, Bath, died recently. He was a noted grower of Pansies, Pinks, and other hardy florists' flowers, and was a frequent exhibitor at the metropolitan shows.

— PROFESSOR OSWALD HEER died recently at Lucerne. He was born at St. Gallen in 1816, and though destined by his parents for the pastorate, he paid more attention to the study of natural history than to the works of the Fathers, and he became so proficient that in 1836, though little over twenty years of age, he was appointed to the chair of botany and entomology in the University of Zurich. He made a special study of the fossil flora, and his monumental work, *The Primeval World of Switzerland*, has been translated into various languages.





W.H. Fitch del

Chromolith. Severeys, Brussels.

Hardy Azaleas

1. C. S. Sargent. 2. Henrietta Sargent. 3. Rubra plena.

WATERER'S NEW HARDY AZALEAS.

[PLATE 599.]

THE ornamental character and chaste beauty of the Hardy Azalea have so often been referred to by us, that it may now appear as an oft-repeated tale; but even if so, it is not the less true that none of our out-door flowering shrubs are more attractive, few so brilliant in their floral hues, as these are during their flowering season, which comes to us with the opening spring-time, a period when, after the dreary dullness of winter, the charm of every budding flower seems to be increased beyond measure.

So long ago as 1830 the original species of North America and Asia Minor had undergone considerable improvement, both in this country and Belgium, many of the best varieties of that date having been raised at Knap Hill by Mr. Michael Waterer, uncle of the present proprietor. For many years subsequently, and up to the present time, Mr. Anthony Waterer has been turning his especial attention to the improvement of these valuable hardy shrubs, not only with the object of increasing the size and substance of their flowers, and heightening and varying their colours, but also with the view of securing foliage in company with the flowers, many of the older sorts lacking this desirable addition, especially those bred chiefly from *A. nudiflora*.

One object which Mr. Waterer has consequently and constantly kept in view has been to throw the flowers somewhat later, by which means foliage and blossoms are produced contemporaneously; this has been accomplished by the admixture of the Californian species, *A. occidentalis*, itself a large white-flowered and showy plant. The results obtained within the last half-dozen years

have been marvellous, and flowers equalling those represented in size and quality, and of nearly all colours — yellows of all shades, crimsons with orange blotches, rose-pinks, coppery-reds, whites, and various other pleasing combinations of colour have been secured. Not only singles in splendid variety have been thus obtained, but also doubles of striking beauty and excellence. We ourselves have notes of upwards of fifty splendid single forms, and of a score or more of fine doubles, all far in advance of anything yet distributed.

Thus improved in quality and size of flower — thus varied in colour till one feels as if nothing further need be desired — thus backed up by the fresh foliage which clothes the budding shoots, we may, on behalf of the hardy Azaleas, challenge comparison with any other early-blooming flowering shrub existing in our gardens. All this, too, let it be remembered, has been worked out from the beautiful originals by skilful crossing and selection, which operations in the hands of the cultivator are but a more rapid way of bringing out the inherent beauties which Nature, from her plastic materials, reveals more slowly in her own unobtrusive way.

It only remains to note that the variety named *C. S. SARGENT* (fig. 1) is one of the noblest of the yellows; *HENRIETTA SARGENT* (fig. 2) is one of the finest of the rose-pinks; and *RUBRA PLENA* (fig. 3) is a pure deep rosy red, and one of the most advanced of the doubles. For this latter, as forcing plants, the varieties named *narcissiflora* with double yellow flowers, and *alba plena* with double white flowers, will be found to be admirable companions.—T. MOORE.

CHRYSANthemum INODORUM PLENISSIMUM.

THOSE of your readers who have not hitherto grown the above-named annual would, I feel sure, not regret doing so another year, and should make a note of it.

It is quite distinct from any annual *Chrysanthemum* I have met with, both in foliage and flower, and is the most useful plant as an annual that I have seen for some time. It grows about two feet in height in good soil,

and bears a profusion of its pure white, double, semi-double, and single flowers for quite three months in the summer. A quantity we had in some mixed beds for supplying cut flowers have been quite a feature during the past summer. The flowers are most useful for the above purpose, and also for making up crosses and wreaths, now so much used at funerals.

Our seed was sown in drills in a frame

placed over a slight hotbed early in April; in fact in just such a place as is generally used for sowing stocks and asters. As soon as we could handle them they were pricked out on a warm border, near a wall in some light rich soil, and finally transplanted with a slight ball attached to the roots into the beds above referred to.

I mention these details to show that it is a tender annual and will repay a little extra kind treatment.—H. J. CLAYTON, *Grimston*.

PROPAGATING DENDROBIUMS.

IRENTHAM has long been known to be famous for its Orchid cultivation, and now, as we learn from a passage in the *Gardeners' Chronicle* (xx., 396), and as we have seen for ourselves, it is becoming equally famous for Orchid propagation. This is what T. B. says on the subject:—

Amongst the very large number of select kinds of Orchids so well grown here, there is much to interest those who are fond of these plants. Some of the rarer kinds of *Dendrobium* are being propagated freely. Mr. Stevens got a plant of the fine hybrid *D. Ainsworthii* as soon as it was obtainable; this was subsequently made into several that have grown to a considerable size, one has fourteen strong leads. He has set to work to propagate five hundred plants of this variety, and it will not take many years to get them up strong at the present rate; the better part of a hundred are now well established with good bulbs, in many cases nine or ten inches long, and strong in proportion. The propagation is from bits of the back bulbs cut in lengths composed of a single joint in some cases, in others with two or three joints; these were taken off last year and laid close together in little shallow earthenware pans on a little damp material, kept close up to the glass in a warm house, where they made bulbs about a couple of inches long. This year the young growths are from four to six times larger than those of last season; each plant is now in a little pan hung up near the roof.

The propagation of *Dendrobiums* and other Orchids with jointed bulbs is not by any means new, having been practised most likely since Orchids of this description were first cultivated, and certainly more with *Dendrobiums* than with most other species, but few

have attempted so much as Mr. Stevens has, or been so successful. Moreover the result of his practice is instructive, both with the variety named and others similarly operated on. In all cases if the last bulb formed the year before, was used for propagation, the cuttings made from it were found of little use, as they would not start into growth like those made of older bulbs, but lay for months alive, yet without moving. In every case the increase in the number of plants has been at a sacrifice in the strength of the old ones, for although all from which the cuttings were taken were as strong as they could be, and have since been as well treated as before, the growths since made are reduced in strength proportionate to the number of old bulbs removed. Plants that have had the penultimate bulbs cut away, leaving the leaders untouched, have this season made bulbs not more than two-thirds as large as those produced last summer.

These results of the propagation of *Dendrobiums* do something to confute the mischievous nonsense that recently has been set afloat about *Dendrobiums* and other Orchids being benefited by cutting away their bulbs—a piece of inconsistency that does not seem to have any other object except trying to make it appear that a new discovery had been made, whereas the result of such work was long enough known to those who had already practised it with the object of increasing the number of their plants.

ARALIA CHABRIERI.

HERE we have one of the many handsome plants of the fine-foliaged class, which are temporarily relegated to the *Aralia* group. It has been introduced from New Caledonia to the Continental gardens, and thence to our own, and is a remarkably handsome plant with a peculiarly dense leafage, and stocky habit of growth.

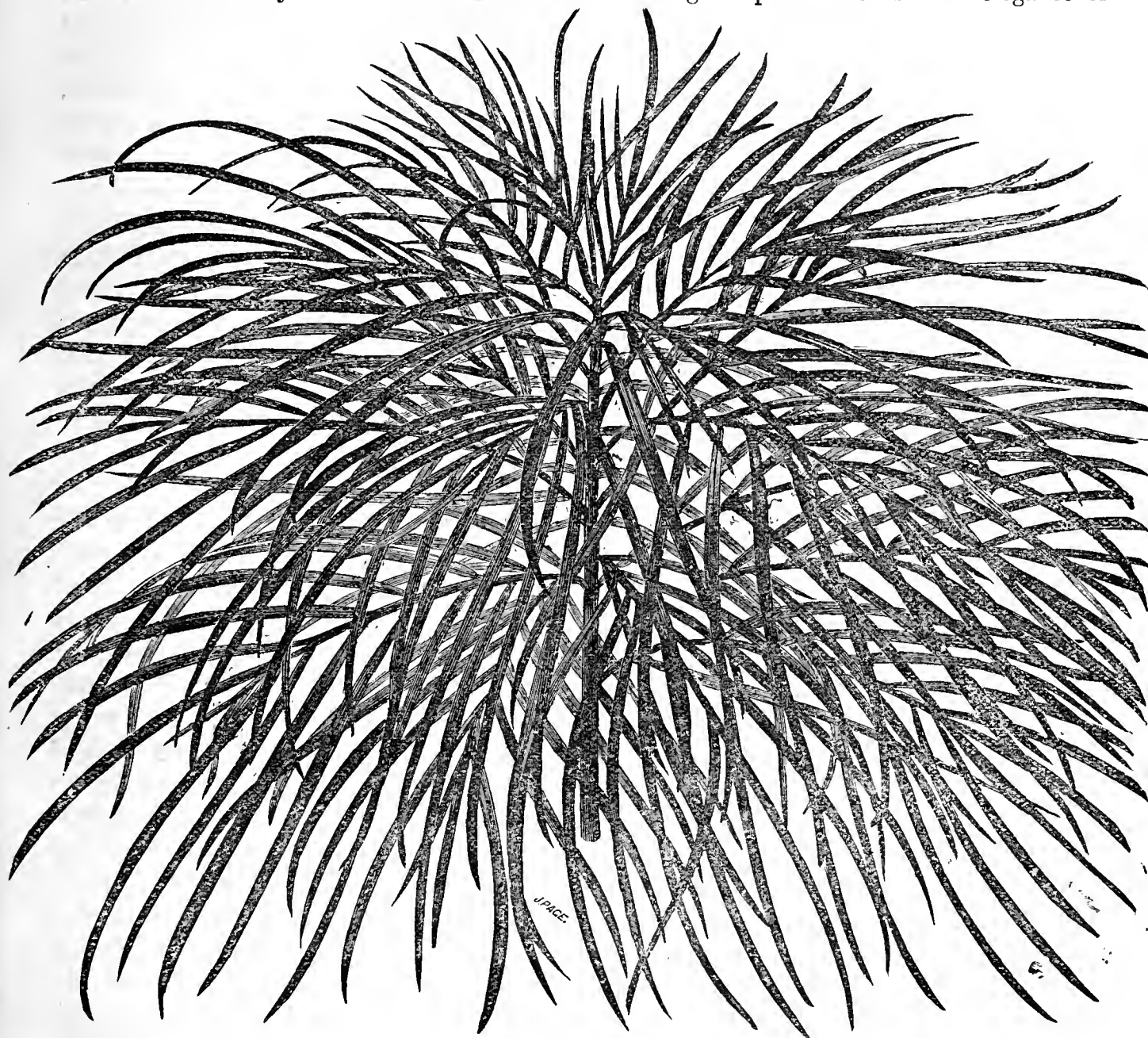
The leaves, which are evergreen alternate and spreading, are about a foot in length, closely set on the stem, and pinnately divided into long narrow linear opposite leaflets of leathery texture which are from six to nine inches long; they are of a deep green colour with a stoutish crimson midrib, and hence the plant takes on something of the aspect of a *Terminalia*.

The species is of free growth, and likely to

become a striking decorative subject in a choice collection of stove foliage plants. It has gained Certificates both from the Royal Horticultural and Royal Botanic Societies.—M.

increase the food of these millions, and, therefore becomes a public boon.

In crossing and breeding Peas, I have kept in view great productiveness and elegance of



ARALIA CHABRIERI.

ON HYBRIDISING CULINARY PEAS.

IT would be difficult to overestimate the value of the culinary Pea. So much are Green Peas esteemed that in most establishments to have abundance of Peas from the beginning of June till the middle of October is to have everything, so to speak, so that to the person responsible for keeping up such a continual supply any and every facility is of importance. But it would be limiting the value and usefulness of the Pea to view it only as an esteemed and indispensable vegetable at the table of the rich. Both green and in a dry state it forms a very important part of the food of millions, so that any improvement in its productiveness goes to

pod, taking for my model *Ne Plus Ultra*, and steadily rejecting all pointed pods like *Telegraph*, *Stratagem*, &c., except where advantage was to be derived in size either of pea or pod. Of course in breeding every advance must be carefully noted and utilised. No one admires those grand Peas that I have just mentioned more than I do, and I have taken every advantage of them in my crossing, endeavouring to put their fine qualities into better shape, and by increasing the size of the peas to fill the pods—for while any part of the pod remains unfilled, as is the case in the kinds alluded to, it is so much useless tax on the energies of the plants. Culverwell's Giant gives us an advance in size of pod, but that too wants filling.

With the view to accomplish some of the

improvements I have been speaking of, in the spring of 1879 I selected a few good kinds, including *Ne Plus Ultra*, *British Queen*, *Veitch's Perfection*, *Advancer*, *James's Prolific*, *Champion of England*, *Multum in Parvo*, *William I.*, and *Little Gem*. These as they came into bloom were carefully attended to, and the flowers to be crossed, while still very small—some of them almost before they were showing the colour of the flowers—were prepared for fertilising: that is, the stamens were carefully removed, and in two or perhaps three days afterwards, when the blooms were fully developed, the pollen from the kind desired to cross with was applied. To prevent bees or flies interfering with the work, it is a good plan, from the time the flower is prepared till the pod begins to swell, to enclose each in a small gauze bag, carefully marking each cross. This I do with different coloured worsteds, which I find much more convenient than any other mode I have seen adopted. The gauze bags will also protect the now interesting young pods from the attacks of birds, sparrows especially, which in some seasons are very destructive to Peas.

Although I did not raise anything very extraordinary from those crosses, I obtained several that were very valuable in furthering my object; notably some fine dwarf forms with the blood of *Ne Plus Ultra*, *British Queen*, &c. The next year I added *Telegraph* and *Duchess of Edinburgh*. The former gave me a large pod, the latter a large pea, for although the pod of the *Duchess* is not large, it is always well filled. I felt now well armed for the work.

The crosses of 1880 produced some wonderfully fine varieties, and exactly in accordance with my expectation, viz., large finely formed well-filled pods, varying in season and flavour according to the different crosses. In 1881, with a few new kinds which had been put into commerce added, I made crosses with my best productions, and the result was a steady progress in the various properties of the Pea. A few varieties of the produce of 1880 were sent to Chiswick for trial, and to one of them a 1st-class Certificate of merit was awarded. Of the produce of 1881, 1882, and 1883 I possess some interesting varieties, which I hope the public will at no distant time have the benefit of.

Great care and much patience is wanted in the raising of Peas in consequence of their sportive disposition—vacillating between the characters of the parents year after year, even when selected with the greatest care, so that when confident of having entirely succeeded in fixing the character of a very favourite variety, it not infrequently happens that the earnest and anxious hybridist is startled to find three or four perfectly distinct forms produced—one tall, another short, one white, another green—this even when all have been rejected but the produce of a single plant. In several instances I have had to go over the same ground again and again, but there is this of encouragement in it, that frequently in this way two or three or even more fine and entirely distinct kinds are obtained.

PEA CULTURE.

Before closing these notes, I should like to say a few words on cultivation. No plant likes good living better than the Pea. What I prefer is well-manured ground, deeply trenched in the autumn, and simply broken on the surface with the hoe or fork before planting. They do better on firm than on newly dug ground. In the first or second week of January I sow in pots the entire stock for the season's supply. To those who make a sowing fortnightly from January till June this will be a surprise, but such has been my practice for five years. When sown the pots are placed in a cold frame, and a piece of glass is placed over each pot, which answers the double purpose of keeping them moist and protecting them from mice. When the young plants appear the glass is removed, and abundance of air is given continually, simply protecting from frost. In the beginning of April, weather permitting, they are planted out in rows 12 to 18 inches apart, according to the variety, the taller and stronger growing kinds requiring more space than the weaker kinds, 4 feet from row to row (6 feet would be better), a tall and a dwarf row alternately; they are staked at once, and mulched with recent stable litter. I always keep a few plants of the different kinds in stock, in case of losses from slugs or other causes. Treated in this way the plants throw out numerous lateral shoots, which as they ascend the stakes continue to multiply till they become perfect bushes, forming rows more dense than if sown

in the ordinary way, and they continue to grow and yield throughout the season. In this way we have had this year a continuous supply of fine Peas from the 10th June till the end of September. In the same way equally satisfactory results have been obtained for five years consecutively. Where very tall Peas are indispensable, *Ne Plus Ultra*, sown early in March and treated as described, would continue to bear till destroyed by frost. Thin planting more than compensates for successional sowing. It should not be forgotten that Peas delight in abundance of water in hot dry weather; if from the liquid manure tank so much the better.

As Peas treated in this way make more growth, and consequently do not come in quite so early, it is advisable to plant a few of an early kind closer, or to sow thicker for an early dish.

What I have already written on the culinary Pea will occupy so much of your valuable space, that my notes on Sweet Peas had better form the subject of another paper.—HENRY ECKFORD, *Boreatton Park, Baschurch.*

THE HEREFORDSHIRE POMONA.

THIS fine work has now reached its sixth annual part, and keeps up the high character which we have already attributed to it. There is no falling off in the beauty and fidelity of the fruit portraits which of course form the most important feature of the book, thanks to the care bestowed upon their work by the very accomplished lady artists, and thanks also to the ability with which M. Severeys has carried out his department. Nor is there any depreciation apparent in the manner in which the text has been worked up by the very competent editor, who has started on a good model, and adhered to it faithfully throughout. The next number is to complete the work, which will then become our standard English illustrated book on Apples and Pears—so far as it goes. This latter remark indicates that the materials are by no means exhausted; and we may therefore express a hope, perhaps before it is too late, that some excuse may be found, in some quarter or other, for proceeding to the issue of a second volume.

The contents of the part now published are as follows:—

Plate XLIX. contains portraits of the following Apples:—Court Pendû-Plat, Landsberger Reinette, Golden Russet, Golden Reinette, Seek no Further, Uellner's Gold Reinette, Golden Winter Pearmain (syn. King of the Pippins).

Plate L. devoted to Apples contains Gloucestershire Costard, Herefordshire Costard, Catshead.

Plate LI. Hybridised Pears raised by T. A. Knight, Esq., consisting of Monarch (of which it is said that much confusion exists and that *Plate IV.* of this work gives an erroneous figure, here corrected), Rouse Lench, Tillington, Dunmore, Broom Park, Eyewood.

Plate LII. Apples—Dumelow's Seedling, syn. Wellington (said to be very hardy, which is certainly not the case in some parts of Hertfordshire, the trees having been nearly killed by the winters of 1880 and 1881), Annie Elizabeth, Lane's Prince Albert, Cockpit, Greaves' Pippin.

Plate LIII. Bergamot Pears—Rivers' Seedling Bergamot, Bergamotte Cadette, Gansel's Bergamot, Bergamotte Suisse, Autumn Bergamot, Bergamotte Hertrich (Dietrich on plate).

Plate LIV. Apples—Wyken Pippin, American Mother, Ashmead's Kernel, Brownlee's Russet, Aromatic Russet, Boston Russet, Wanstall.

Plate LV. Pears—Glou Morceau, Jersey Gratoli, Marie Louise d'Uccle, Marie Louise, Nouveau Poiteau.

Plate LVI. Apples—Kentish Fillbasket, Calville Malingre, Calville Blanche d'Hiver, Calville Rouge d'Automne.

Plate LVII. Redstreak Apples—Spreading Redstreak, Yellow Redstreak, Upright Redstreak, Cowarne Red, Cherry Pearmain, South Queening, Knotted Kernel.

Plate LVIII. Perry Pears—Rock Pear, Coppy Pear, Stony Way Pear, Cheat Boy, Thorn Pear, Winnall's Longland, Newbridge Pear, Yolking House, Blakeney Red. In reference to Cheat Boy Dr. Hogg suggests that the name indicates that boys who purchase it are not to be congratulated on their bargain. May it not also imply that boys who appropriate the fruit—for boys will be boys in Herefordshire we suppose as elsewhere—will find that they have made a mistake in their selection.

Plate LIX. Apples—Newland Sack, Minier's Dumpling, Altriston, Irish Reinette, Royal Somerset.

Plate LX. Pears—Léon Leclerc de Laval, Gilogil, Colmar Van Mons, Winter Thorn, Black Worcester.

Plate LXI. Apples—Welford Park Nonsuch, Round Winter Nonsuch, Mabbitt's Pearmain, Moss's Incomparable, Rushock Pearmain, Melon Apple, Mère de Ménage, Peasgood's Nonsuch (very large and handsome, but not prolific).

GOLD-LACED POLYANTHUSES.

I QUITE agree with Mr. Dean that these are easily injured by being kept too dry at the roots in winter; but no good grower would allow such valuable plants as Gold-laced Polyanthuses of the best varieties to be injured in that way. On the other hand it is a mistake, and a serious one, to leave them exposed out of doors all the winter in pots. If the plants are healthy and potted at the right time, there are no losses at all in the winter. I have never seen healthier or better plants than those usually exhibited by

the late Mr. H. Sanderson, of Whalton, at the Newcastle spring show, and his treatment of them was of a very simple kind. I have tried to grow them in the same way and with very satisfactory results.

The time of potting is the last week in July or the first in August. The plants are taken up from the open ground, and after being parted out by the hands into single crowns they are potted into five-inch pots, the small crowns being potted into a size smaller. I put the plants into a cold frame behind a north wall until they have rooted into the fresh compost; this they will do in a week or ten days. After that the best way is to place them out of doors in a cool place until the middle of October, when it is best to put them in a frame, so that they may be sheltered from excessive wet, which is injurious, although even that does not harm them so much as allowing them to become dusty dry.

They stand well out of doors during winter, if they are planted out in the open ground. Indeed Mr. Sanderson never grew the same plants two years in succession in pots. His custom was to plant them out when they had done flowering, and not to disturb them for potting purposes for fifteen months. I saw a most splendid lot of plants in Mr. Brockbank's garden at Brockhurst, Didsbury, last April. The plants were planted out in a frame, and had made a very strong, healthy growth. The late Mr. Tom Mellor was also very successful in growing the Polyanthus planted out in frames. I fancy he kept them in frames during the summer as well as in the winter months. Of course it is easy to remove the lights at all times, replacing them only to shelter the plants from excessive wet. The plants like a compost rather heavier than that used for the Auricula. Their desperate enemy in the south is the red-spider. It is almost impossible to keep the leaves free from this pest during the summer months, and its attacks so exhaust the plants that they often succumb to them. —J. DOUGLAS, *Great Gearies, Ilford*.

THE fine Bellwort known as *CAMPANULA VAN HOUTTEI* was raised some twenty years since by Dr. Rodigas between *C. nobilis* and *C. grandiflora*. It was at first called *C. hybrida*, and is a beautiful acquisition for our flower gardens.

PROVINCIAL APPLE SHOWS.

MANCHESTER.

A GREAT show of Apples took place at the Town Hall, Manchester, on November 2, and following days. It was a really large show, numbering some 3,000 dishes of fruit, which according to the labels included about 900 varieties.

Of Culinary Apples, the leading sorts shown were the following:—Lane's Prince Albert, a grand solid red-cheeked sort of very productive habit and a good keeper; Loddington Seedling or Stone's Apple, a heavy and sure bearing sort, deservedly acquiring popularity; Ecklinville Seedling, a sure cropper everywhere, of large size and fine quality, and one of the most valuable of kitchen fruits; Winter Hawthornden, excellent both in regard to productiveness and quality, as well as its keeping properties; Blenheim Pippin, a universal favourite, both for its handsome appearance, and its combined utility both for culinary and dessert purposes; Royal Russet, the best of its class, generally a good cropper and of fine size, and like the last good for all purposes; Tom Patt, a bright-coloured sort, very high in favour down West; Cox's Pomona; Annie Elizabeth, a large fruit of good flavour, a late keeper; Kentish Fillbasket; Gloria Mundi, French Crab, a long keeping sort of great value for spring use; Warner's King, one of the finest and most constant of bearers, and of large size also; Waltham Abbey Seedling, Alfriston and Cellini, three excellent leading sorts; Norfolk Beefing and Striped Beefing, both late keepers; Lord Derby, a popular productive sort; Peasgood's Nonsuch, a very handsome and large sized fruit; and Golden Noble, productive and strikingly handsome. There were of course many other excellent sorts shown.

Of Dessert Apples, there were excellent samples of Ribston Pippin, Golden Pippin, Fearn's Pippin, King of the Pippins, Cox's Orange Pippin, Cockle's Pippin, Keddestone Pippin, Downton Pippin, Braddick's Nonpareil, Scarlet Nonpareil, Golden Nonpareil, Northern Spy, Margil, Sam Young, Cornish Aromatic, and Cornish Gilliflower, Sykehouse Russet, Pineapple Russet, Claygate Pearmain, Lamb Abbey Pearmain, Royal Pearmain, and other popular kinds.

The show was well attended, over 6,000 visitors, in addition to the members of the Manchester Botanical and Horticultural Society, under whose auspices the exhibition was organised, with Mr. Findlay's usual success, having been admitted.

HEREFORD.

THIS Exhibition, which was held in the Shire Hall, Hereford, on October 23—24, was very successful, some 3,000 dishes of Apples and Pears being staged. We can only note a few of the leading exhibits, as follows:—

In the class for 24 KITCHEN APPLES Mr. Haycock, gardener at Barham Court, Maidstone, was 1st, his fruit being even finer than that shown at Chiswick, the best being Peasgood's Nonsuch, Belle Dubois, Lord Derby, Alexander, Reinette du Canada, Loddington, Royal Russet, Mère de Ménage, very large,

well coloured; Beauty of Kent, and Warner's King.—The prizes for 15 TABLE APPLES were well contested, Mr. Haycock again coming in 1st, his collection being well set up and varied, though the fruit was possibly a little too large for a select dessert; it consisted of Pine Golden Pippin, Washington, Blenheim, Margil, Melon, Golden Russet, King of Pippins, Ribston, Braddick's Nonpareil, Queen Caroline (a fine foil for the other sorts, but scarcely a dessert fruit); Court Pendu Plat, Mother, well coloured; and Ross's Nonpareil.—In the Apple class for best present flavour, there was a keen contest, the Mother Apple was well 1st; Cox's Orange 2nd; Hereford Old Pomeroy 3rd; and Crimson Gilliflower 4th.—The heaviest Apple class gave another victory to Mr. Haycock, with specimens of Belle Dubois weighing 20 oz., being 2 to 3 oz. over some wonderful examples of Peasgood's Nonsuch from Mr. Higgins, a local grower.—In the class for new Culinary varieties the 1st prize was awarded to *Saltmarsh's Queen*, very finely marked fruit, sent from Chelmsford. The 2nd prize went to the Rev. Mr. Pilson, for a pale primrose Apple of the Golden Noble race. For Dessert Apples the 1st prize went to *Ballard's Seedling*, an Apple of which we ought to hear more, since Cox's Orange is one parent, and probably Braddick's Nonpareil the other; the fruit is handsome, fine in colour and shape, and seems likely to keep till March. The 2nd prize went to *Gipsy King*, heavy and well coloured, shown by Messrs. Geo. Bunyard & Co., of Maidstone.

The Pear classes were fairly contested, Mr. Haycock was 1st with 15 VARIETIES, which were all grand, the Pitmaston Duchess being very large, and just colouring elegantly; Doyenné Boussoch, Triomphe de Jodoigne, Doyenné du Comice, Beurré Diel, Easter Beurré, Beurré Hardy, Beurré Superfin, General Todleben, Conseiller à la Cour, Durandau, Passe Crassanne, Duchesse d'Angoulême, Nouveau Poiteau, being all large and of good shape; the grand late Pear Marie Benoist was also included. Sir H. Soudamore Stanhope (who only a few days ago inherited the title of Earl of Chesterfield) won the 2nd place with a fine collection from the Holme Lacey cordon trees, Beurré Hardy, Flemish Beauty, finely coloured; Marie Benoist, Doyenné Boussoch, Chaumontel, and Beurré Rance being conspicuous.—In the Pears for present flavour there were a large number of entries. The 1st prize was unanimously given to Thompson's, grown by Mr. Piper, of Ledbury; 2nd to Marie Louise (from a standard tree); 3rd to Seckle, grand fruit from Welford Park; 4th to Beurré Superfin. In the Heaviest Pear class Pitmaston Duchess was 1st with a bulk of 24½ oz.—M.

CROCUS CULTURE.

AT the last of the experimental summer evening meetings of the Royal Horticultural Society, Mr. G. Maw read an interesting and valuable paper on the Geographical Distribution and Cultivation of the Species of *Crocus*—a subject to which he has given special attention. A few of the opening sentences, with some cultural remarks, are here transcribed as likely to be useful to cultivators and lovers of these bright spring flowers:—

Out of a genus which is now known to number about seventy species, two only,

Crocus vernus and *C. aureus*, and their varieties, can be said to be thoroughly adopted as decorative plants. *Crocus vernus*, the parent of all the blue, violet, lilac, feathered, and white vernal Crocuses, ranges in a wild state through 23° of longitude, from the Pyrenees to the Carpathians, and through 12° of latitude, from Sicily to the Carpathians. *Crocus aureus*, the parent of the Dutch yellow and its several varieties, is indigenous to Western Asia Minor, Turkey, and the Danubian Principalities; and extends as far north-west as Hungary. No records exist of the date of their introduction, but it is clear from the Crocuses preserved in the various ancient herbaria that these two species at least were well known to cultivators at the end of the sixteenth century.

In addition to *C. vernus* and *C. aureus*, eight or nine other species appear to have been sparingly in cultivation during the seventeenth and eighteenth centuries, viz.:—the Cloth of Gold, *Crocus susianus*; the Cloth of Silver or Scotch Crocus, *C. biflorus*; *C. versicolor*, *C. nudiflorus*, *C. sativus*, *C. speciosus*, *C. serotinus*, *C. byzantinus* or *iridiflorus*, and one or two others; but up to nearly the end of the first half of the present century, scarcely more than a dozen species out of the seventy now known existed in English and Dutch gardens; and of these but two were generally employed for decorative purposes.

Cultural directions for a genus so well known and so easily grown seem almost superfluous, but there are a few points to which it may be convenient to refer in dealing with the *Croci* as decorative plants. Taking the whole genus of about seventy species, they must be viewed as in continuous succession, from the beginning of August till April, and of these it is only the earlier autumnal, or the distinctly vernal species, that can be relied upon in our climate for open-air garden decoration. Although all are hardy, and most of the winter flowering species will flower in the open ground, those that flower in November, December, and January, are so liable to injury by frost and rain, that they are practically worthless as decorative plants for the open garden. For such, as well as for the less robust and less floriferous species, the protection of a brick pit is necessary. The

bottom of this should be well below the level of the ground, and it should be filled up with about 1 foot in depth of fine river silt or sandy loam, the surface of which should be a little below the level of the surface of the ground adjacent to the pit. Proper drainage is essential, but this being attained, Crocuses during their period of growth delight in a uniformly moist subsoil. It is convenient to separate each species by strips of slate or tiles, which may be buried below the surface, and the corms planted about 3 inches deep. A mulching of rotted cocoa-nut fibre or finely-sifted peat keeps the surface uniformly moist, and prevents the substratum of loam from clogging or caking on the surface. At the time of the maturity of the foliage, which generally takes place about the end of May, water should be withheld, and the Crocus bed covered up and allowed to get quite dry, till the end of July, when a copious watering may be given, or the pit exposed to natural rainfall.

Crocuses are easily multiplied by seed, which should be sown as soon as ripe in July, though germination will not take place till the natural growing period of the species. Seedlings take from two to three years to arrive at maturity, and should be left for the first two years undisturbed in the seed bed, and then taken up and replanted.

Of the earlier autumnal species suitable for the open border, the following may be enumerated for successional flowering:—

- | | | |
|-----------------|-----------------------|--|
| C. Scharojani, | orange; | early in August. |
| „ vallicola, | straw-coloured; | late in August and early in September. |
| „ nudiflorus, | blue; | September. |
| „ pulchellus, | lilac; | September and October. |
| „ speciosus, | blue; | September and October. |
| „ iridiflorus, | blue; | September and October. |
| „ Salzmanni | } lilac or blue; | October and November. |
| „ asturicus | | |
| „ Clusii | | |
| „ cancellatus | } In the late autumn. | |
| „ Cambessedesii | | |
| „ hadriaticus | | |

These are succeeded by a long series of late autumnal, winter, and early vernal species, which are best grown to advantage under the protection of a brick pit.

Of the vernal species suitable for the border the earliest is *C. Imperati*, flowering in February, followed by:—

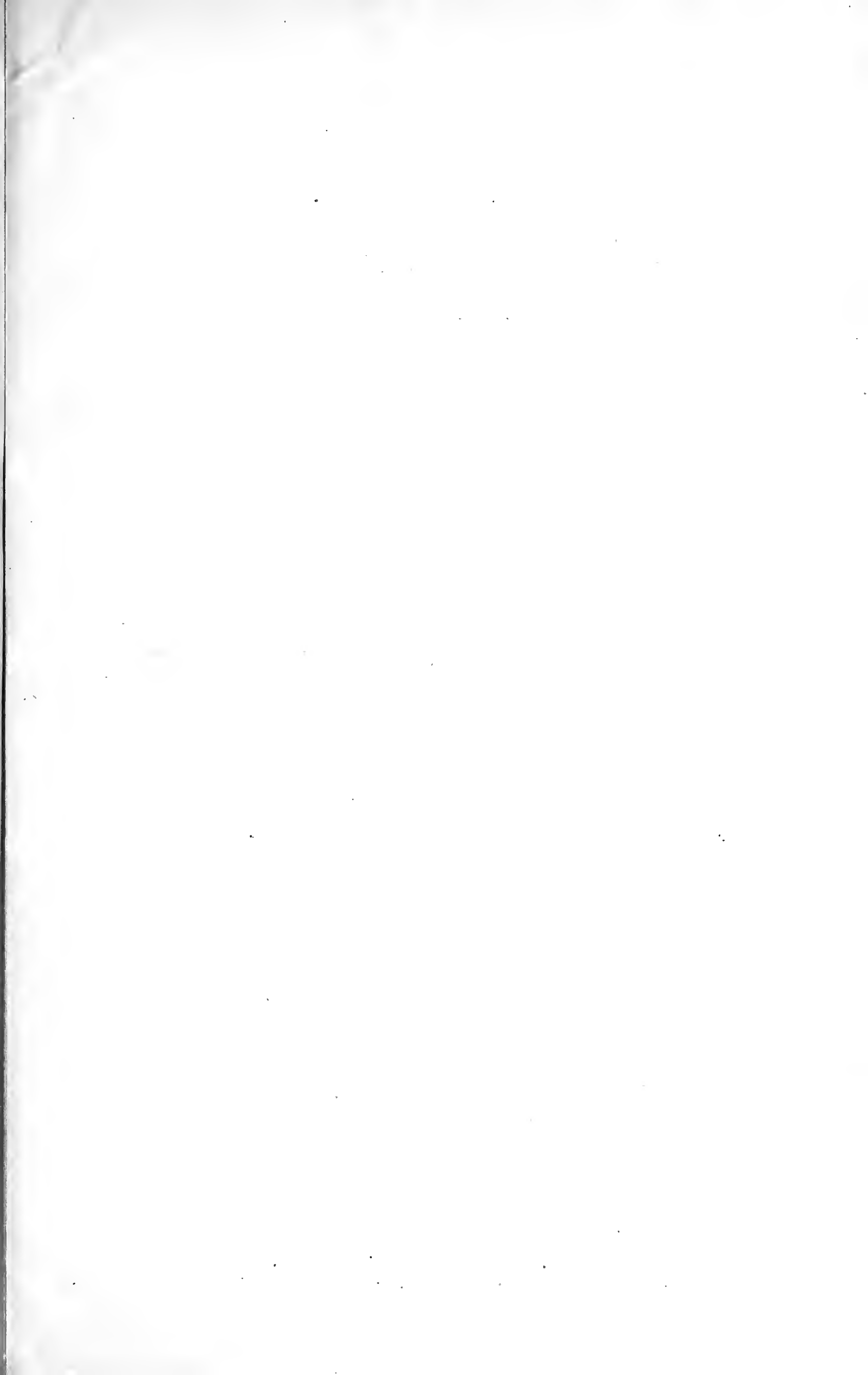
- | | | |
|--------------|--|--------------|
| C. susianus, | or Cloth of Gold, | in February. |
| „ biflorus | } Flowering from the end of February to the first week in April. | |
| „ corsicus | | |
| „ etruscus | | |
| „ suaveolens | | |
| „ versicolor | | |

- | | |
|------------------------------------|--|
| C. vernus | } Flowering from the end of February to the first week in April. |
| „ Tommasinianus | |
| „ dalmaticus | |
| „ banaticus | |
| „ Sieberi and var. versicolor | |
| „ chrysanthus | |
| „ aureus | |
| „ sulphureus | |
| „ sulphureus pallidus and striatus | |
| „ stellaris | |
| „ Olivieri | |
| „ minimus | |
| „ Balansæ | |

Of the Croci, but recently introduced, many more of the vernal species will probably be found suitable for spring garden decoration, but in the above lists we give those only which are more generally known and easily obtainable.

Holland, with its rich, light alluvial soil, and Lincolnshire, with its “Trent warp,” have been for many generations the sources from which the English market has been supplied with the varieties of the three or four species grown in English gardens. The last five or six years have put us in possession of five-sixths of the known species of the genus, and we must commend them to the care of the Dutch and Lincolnshire bulb growers in order further to enrich our collections.

MATÉ is a South American beverage prepared from the leaves of *Ilex paraguayensis*, and takes the place of Chinese Tea. In the preparation of Maté proper, the leaves are dried, or roasted in cast-iron pans set in brick-work and heated by fires underneath; when the leaves are sufficiently heated they are pounded until reduced to powder, and then packed in bags. There are three qualities known in the South American markets. The best is said to be prepared from the young leaves when they are about half expanded from the bud, and is called *caa-cuys*. The second consists of the full-grown leaves, carefully picked and separated from twigs, and frequently the midrib and veins of the leaves are removed; this is called *caa-mira*. The third is made from older leaves, carelessly broken up with the small branches and leaf-stalks, all of which undergo the roasting and pounding process together; this is called *caa-gnaza*. The leaves are also collected and dried in a similar manner to that adopted in the preparation of Chinese tea; this is called Maté in leaf, and is prepared for use by infusion, and taken with milk and sugar in the same way as ordinary tea. Maté in powder is also prepared by infusion, by putting into a small vessel about an ounce of the powder, and pouring boiling water over it; as the fine dust does not fall to the bottom, but remains suspended in the water, the Maté is taken by means of a sucker, that is, a tube terminating in a small hollow ball pierced with very fine holes. Maté contains nearly double the quantity of theine that the same weight of grains of coffee contains, and about the same quantity as tea leaves. The Brazilians recommend Maté as a nourishing, warm, aromatic, stimulating, and very cheap beverage.





W. H. Fitch del.

Apple Landsberger Reinette

APPLE LANDSBERGER REINETTE.

[PLATE 600.]

AMONG recently introduced Apples there are few that will be found more acceptable, or more generally useful, than the variety named Landsberger Reinette. As its name implies, it hails from Germany. Its origin is not further known than that it was received by the Royal Horticultural Society from M. Oberdieck, the celebrated German pomologist, some fifteen years ago, and has been grown and fruited at Chiswick, where it is much appreciated. About two years ago it was exhibited by James McIntosh, Esq., Duneevan, Weybridge, who has grown it for some years, and was awarded a 1st-class Certificate by the Royal Horticultural Society's Fruit Committee.

Our illustration hardly does justice to the extremely delicate and handsome appearance

of this Apple, though a fair representation of the produce of 1881; sometimes it is covered with a thick bloom, and flushed with bright red on the exposed side, in a similar manner to Manks Codlin.

The fruit may be described as of medium size, conical in form with a broad flat base, angular towards the eye, which is large, but closed and set in a narrow plaited basin. Stalk long, slender, set in a very even, smooth basin. Skin soft, pale straw, flushed deep orange or bright red on the exposed side. Flesh white, very tender, briskly sweet, and fresh. It is an excellent Apple for the dessert when newly gathered, and is also good for cooking purposes during the month of October. The tree is of moderately robust growth, and a very free and constant bearer.—A. F. B.

REGISTER OF NOVELTIES.

NEW PLANTS.

ANGRÆCUM SCOTTIANUM, *Rehb. f. (Bot. Mag., t. 6723)*.—A very interesting epiphyte, remarkable for its terete rooting stem, and semicylindrical, subdistichous elongate recurved leaves (3—4 in.) which are furrowed on the upper side, and for its long-spurred (4—5 in.) white flowers, of which the lip is large $1\frac{1}{2}$ inch broad, transversely oblong, with rounded angles, retuse in front with a short mucro; the sepals and petals are linear. Native of the Comoro Isles; Kew.

BOMAREA KALBREYERI, *Baker (Rev. Hort., 1883, 546, with tab.)*.—A free-growing climbing plant, with shortly-stalked oblong acuminate leaves, glabrous above, downy beneath, the flowers in large terminal umbels, pedicellate, the three outer segments about an inch long, oblong spathulate, brick red, the three inner ones longer obovate wedge-shaped, orange yellow spotted with red. New Grenada; M. Godefroy-Lebeuf.

CYCAS BEDDOMEI, *Dyer (Trans. Lin. Soc., 2 ser. ii. 85, t. 17)*.—A fine and distinct new Cycad, the affinity of which seems to be with *C. circinalis*, of which Mr. Dyer considers it a reduced form. The stems (? young) are a few inches high with closely imbricated glabrescent leaf bases; the leaves are about three feet long and nine inches broad, with a quadrangular petiole furnished at the base with tufted tomentum and in the upper third with a few minute teeth, the rachis subquadrangular and the leaf segments about half an inch wide. The comes (male) are about 13 inches long and 3 inches in diameter, slightly stipitate, the scales tapering acuminate from a deltoid base, those near the base erect, and those on the upper half deflexed. Indian Peninsula; Kew.

FRITILLARIA PALLIDIFLORA, *Schrenk (Bot. Mag., t. 6725)*.—A hardy bulb, producing stout erect stems, 6—15 inches high, with sessile, oblong, or the upper lanceolate leaves, and deflexed flowers one to six from the axils of the upper leaves, the perianth broadly campanulate, an inch and a-half long, of a creamy green colour. Siberia; Kew.

PENTSTEMON BARBATUS LABROSUS, *A. Gray (Gard. Chron., N.S., xxi., 536, fig. 91)*.—A handsome herbaceous perennial, hardy at Ipswich, and referred

by Dr. Asa Gray to the well-known showy *P. barbatus*. It is quite glabrous, with oblanceolate elongated root leaves, and erect stems 2 to 5 ft. high, with linear leaves and slender panicles of bright crimson scarlet flowers, the tube of which is an inch and a-half long, the upper lip half an inch long, oblong and concave, barely 2 lobed at the tip, and the lower nearly as long again and divided deeply into three linear divisions, both three throat and lobes, like the New Mexican variety *Torreyi*, wanting the beard which is found in the type. California, on Mount Pinos, 7,000 feet elevation; W. Thompson.

PHILODENDRON MAMEI, *Ed. André (Rev. Hort., 1883, 492, with tab.)*.—A fine tropical Aroid, with a reddish climbing stem, furnished with leaves of a glossy green, decorated with abundant irregular elongate bands of silvery grey more or less confluent on the upper side, and of a very pale green beneath; the petiole is tinted with purple, and the leaf blade oval cordiform nearly a foot long, with a deep open sinus. Introduced from Ecuador by M. André, and named in compliment to M. Mame of Tours; M. Godefroy-Lebeuf.

RHODODENDRON CURTISII, *Hort. (Gard. Chron., N.S., xxi., 635)*.—A beautiful and very distinct shrubby plant, a perfect little gem, the first of a new race. It is of dwarf spreading habit, about two feet in height, with slender branches, having the lance-shaped leaves in tufts at their ends, and deep bright crimson campanulate flowers borne three or four together in terminal clusters. Native of Sumatra, at high elevation; 1st-class Certificate R.H.S., Nov. 13; Veitch & Sons.

ZYGOPETALUM BURKEI, *Rehb. f. (Gard. Chron., N.S., xxi., 635)*.—A very pretty new epiphytal Orchid, with showy flowers, having the sepals and petals broad oblong greenish yellow, heavily barred with dark chocolate brown, and the lip pure white with a rosy purple frill or ruff at the base. Native of Guiana; 1st-class Certificate R.H.S., Nov. 13; Veitch & Sons.

NEW FLOWERS.

CHRYSANTHEMUMS (Japanese).—*Mary Major*, a beautiful pure white variety, very chaste and distinct, and likely to make a good sort to grow for cut blooms;

Chinaman, a large full flower of a brilliant violet purple hue, dashed with silvery white, fine and distinct; and *La Vierge*, an extremely pretty pale variety of good quality, and apparently very free; all 1st-class Certificates Hackney Chrys. Soc., Nov. 6. *Mdlle. Louise Sabatie*, bright violet rose, tinted with white, long and slightly quilled florets; *Mons. Boyer*, rosy lilac, large and very distinct; and *J. Hillier*, a striking looking variety with long curled drooping florets of a rich amaranth colour, spotted with violet; all 2nd-class Certificates Hackney Chrys. Soc., Nov. 6. The foregoing were from Messrs. H. Cannell & Sons. *Mrs. Townsend*, bright orange-red deepening to maroon at the points of narrow slightly twisted florets; *Joseph Mahood*, orange tinted with cinnamon, a fine large flower of great beauty; and *R. Ballantine*, a very fine incurved Japanese variety, which, when fully developed, is of a soft pinkish violet colour; the reverse purplish-crimson; all 1st-class Certificates Hackney Chrys. Soc., Nov. 6; Mahood & Sons. *Roseum Superbum*, bright rosy pink with narrow ribbon-like florets, large and full, very distinct and charming in colour, and an excellent addition to the Japanese Section; 1st-class Certificate R.H.S., Nov. 13; Veitch & Sons and J. Laing & Co. *Salteri* (Salter), a reflexed flower, very large and full, bright orange red, the reverse deep gold, very fine, large and bold; and *Comet* (Salter), pale reddish or orange brown, the reverse of the florets deep gold, very fine and striking; all 1st-class Certificates R.H.S., Nov. 13; Veitch & Sons. *George Stevens*, a flat-petalled reflexed variety in the way of Dr. Sharpe, with bright crimson florets somewhat broad, the reverse gold and cream, very distinct and medium sized; 1st-class Certificate R.H.S., Nov. 13; G. Stevens. *Mdlle. La Croix*, large, pure white, slightly incurved and twisted ribbon-like florets, very fine and distinct; and *Mons. Henri Jacotot*, pale orange-red, deepening to rich purple on the exterior florets, the centre ones gold, medium-sized, full and distinct; 1st-class Certificates R.H.S., Nov. 13; T. Jackson & Son.

Other new varieties comprise, *Thomas Todman*, pale purple, thread-like florets. *Source d'Or*, golden cinnamon, quilled florets, ball-like flowers, fine and distinct. *L'Or du Rhin*, pure gold, small thick thread-like florets; charming in colour and very free. *Boule d'Argent*, very deep bright orange-red, with a golden reverse to the florets; very showy. *Mons. Moussilac*, dull orange red, golden buff reverse, style of James Salter, very distinct. *Mons. Astorg*, a large pure white variety in the way of Elaine, with broad flat florets. *Flamme du Punch*, golden centre, orange and cinnamon florets, sulphur reverse. *Margot*, the exterior florets lilac, creamy white ribbon-like florets. *Mons. Brunet*, delicate pink, large and full flowers. *Duchess of Albany* (Salter), a large variety, with long, thread-like, creamy white florets, the exterior delicate lilac. *W. Robinson*, cinnamon and gold, large in size, half twisted and half quilled florets, very fine. *Mons. Romain*, deep golden thread-like florets, fine in colour. *Jeanne d'Arc*, white, slightly tipped and striped with bright lilac.

CHRYSANTHEMUMS (Incurved Large-flowered).—*Lord Wolseley*, an orange bronze sport from Prince Alfred; large, fine in form, and good in colour; 1st-class Certificate Hackney Chrys. Soc., Nov. 6; H. Cannell & Sons. *Bendigo*, a fine golden sport from the creamy white and pink Mrs. Heale, charming in colour, fine in shape, and distinct; 1st-class Certificates R.H.S., Nov. 13, and Hackney Chrys. Soc. Nov. 14; Mr. Ridout.

CHRYSANTHEMUMS (Pompon).—*Madame D'Arnaud*, bright pale purple, small, very fine form, distinct and pretty; 1st-class Certificate R.H.S., Nov. 13; J. Laing & Co. *Mons. Lidquet*, deep

purple in colour, very full and finely formed flowers, extra fine; 1st-class Certificate R.H.S., Nov. 13; J. Veitch & Sons. *New Marabout*, white and delicate lilac, the florets much imbricated. *Yeddo Lilac*, large and very full symmetrical flowers of a pale purple-lilac colour. *Elegant*, very small bronzy red, borne in clusters. *Vulcan*, dark chestnut red. *Dupont de l'Eure*, pale purple; very fine form.

IRESINE formosa.—A sport from *I. Lindenii*, the foliage golden veined with crimson and pencilled with green; very effective in appearance; keeps its character well out of doors, and makes an excellent bedding plant; 1st-class Certificate R.H.S., Nov. 13; G. Goldsmith.

VIOLET, Comte de Brazza's Neapolitan White.—A very fine and distinct double white violet, a white form of the Neapolitan and very floriferous and fragrant; a decided acquisition; 1st-class Certificate R.H.S., Nov. 13; W. Allan.

NEW FRUITS.

APPLES.—*The Sandringham*, a large and distinct-looking variety, heavy, conical-shaped, green-skinned speckled with innumerable small russet spots, and slightly coloured on the sunny side; a first-rate culinary variety; 1st-class Certificate R.H.S., Nov. 13; Mr. C. Penny. *Taylor's Kernel*, a large handsome culinary or dessert variety, highly coloured on the sunny side, and of high specific gravity; 1st-class Certificate R.H.S., Nov. 13; Mr. Parker.

GRAPE, Winter King.—Said to have been obtained by grafting Gros Colmar on Raisin du Calabre; the berries oval, and of a deep blue-black colour, the flavour sweet and refreshing. The graft produced six bunches, all similar in character; B. S. Williams.

NEW PUBLICATIONS.

The GARDENERS' CHRONICLE (Oct. 27—Nov. 17) contains figures or descriptions of *Dammara australis*, Lambert (p. 525, fig. 86), the Kauri Pine, now producing its cones in the great temperate house at Kew; it is a noble evergreen Conifer, with leathery lance-shaped leaves and roundish cones, well adapted for decorating winter gardens and similar structures; New Zealand.—*Cattleya triophthalma*, Rehb. f. (p. 526), a fine hybrid between *Lælia exoniensis* and *C. superba*, with two-leaved stems, and three-flowered racemes of flowers equal to those of *C. superba*, having purple-rose sepals and petals, and a lip of which the side lobes are whitish-yellow purple at the end, and the front lobe has a central transverse and two lateral areas of whitish-yellow, with the side angles and the front margin rich purple, the three pallid areas suggesting the name; Veitch & Sons.—*Odontoglossum lepidum*, Rehb. f. (p. 526), a supposed natural hybrid, with flattish round pseudobulbs, a short branching many-flowered inflorescence, and flowers nearly equal to those of *O. cirrhosum*, with lanceolate acute sepals and petals, and a cuneate hastate lip with a central claw and a reniform apiculate front lobe; they open yellow but change to white, with a few cinnamon blotches; New Grenada; Shuttleworth & Carder.—*Adiantum cuneatum strictum*, Moore (p. 526), a pretty dwarf evergreen stove Fern, remarkable for its upright spriggy habit of growth; probably of garden origin; B. S. Williams.—*Lælia elegans Houtteana*, Rehb. f. (p. 527), a fine variety in which the nearly blunt side lobes of the lip are tipped with purplish-mauve, and the dilated nearly reniform front lobe of the richest purple, the mid-lines of the disk also wholly purple instead of trilineate; W. Lee, Esq.—*Cattleya Eldorado ornata*, Rehb. f. (p. 526), a beautiful variety, with all the charms of the type, added to a large dark purple blotch at the end of each petal; W. Lee, Esq.—*Cattleya Mossiae*, Hook. (p. 530, fig. 89), and *Lælia purpurata*, Lindl. (p. 530, fig. 90), a pair of typical

flowers drawn to represent the distinctions to be found in the pollen masses of the two genera.—*Pentstemon barbatus labrosus*, A. Gray (p. 536, fig. 91), a handsome hardy herbaceous perennial, with long oblanceolate root leaves and tall branching stems, 2—5 ft. high, bearing slender panicles of bright crimson-scarlet flowers, which differ from those of *P. barbatus* in wanting the fringe of hairs to the flowers; California; W. Thompson.—*Cycas Beddomei*, Dyer (p. 556), a fine new Cycad, with stems (in young plants?) a few inches high, leaves about three feet long, and male cones with taper-pointed scales; India; Kew.—*Vanda hastifera*, Rehb. f. (p. 556), a fine epiphyte, bearing lax racemes of flowers, which have the undulate sepals and petals light yellow with fine red blotches, the lip which is hastate and hairy at the base and dilated blunt tumid and shining in front, is white marked with brown and mauve, and the column is white; Sundaic peninsula; Sander & Co.—*Oncidium trifurcatum*, Lindl. (p. 556), "a fine old Orchid of Lindleyan nobility" with flowers resembling those of *O. serratum*, but the petals are free; the reniform dorsal sepal and petals are brown with the wavy margins light yellow, the lip is crimson-lake, with three pale yellow calli and has very long deflexed side lobes, and on the column beneath the stigmatic hollow two sword-like blades; Peru; Sander & Co.—*Stelis zonata*, Rehb. f. (p. 556), near *S. muscifera* but smaller; it has short stems, thick cuneate oblong leaves, and one-sided racemes of ochre-coloured flowers, the petals having a mauve midzone, and the column mauve with an ochre zone; Demarara; Veitch & Sons.—*Nuphar advena*, Aiton (p. 556, fig. 92), a fine hardy aquatic with yellow flowers much like those of *N. lutea*, but larger, and larger bolder leaves, which rise out of the water instead of floating on the surface.—*Fuchsia exoniensis* (p. 560, fig. 101), a garden variety raised in 1842 by the late Mr. Pince of Exeter. The variety here figured appears to be that cultivated as *F. corallina*, the true *exoniensis*, according to the very natural-looking figure, being at least half an inch longer in the tube of the flower. It is a good strong-growing hardy free-blooming sort, still well worthy of attention.—*Salvia discolor*, H.B.K. (p. 588), a cool stove or greenhouse suffruticose plant, of erect habit, with long stalked ovate-oblong leaves, and large terminal panicles of tubular two-lipped blackish purple flowers of which the upper lip is entire. It has been wrongly identified as the *Salvia mexicana* minor, and comes from the Andes of Peru; Cannell & Sons.—*Odontoglossum Pescatorei Schröderianum*, Rehb. f. (p. 588), a splendid form of this lovely Odontoglossot, which when offered as *O. P. Veitchianum* was purchased for seventy guineas. It comes very near to that beautiful plant, but Prof. Reichenbach declares it to be different, in having more purple in the bands of colour by which it is marked, and the markings not reaching so far towards the ends of the sepals and petals; New Grenada; now in the possession of Baron Schröder, after whom it is named.—*Masdevallia brevis*, Rehb. f. (p. 588), an interesting species allied to *M. ochthodes* but more slender, with smaller cuneate oblong leaves and shorter flowers, the upper sepal yellow with three rows of purple spots, and the tail dark purple, the lateral sepals ventricose with lemon-coloured keels running out into lemon-coloured tails, the anterior superior area orange with purple, the rest brown; British Guiana; Veitch & Sons.—*Saccolabium Witteanum*, Rehb. f. (p. 618), a curious epiphyte, with cuneate-oblong obliquely bidentate leaves, and elongate racemes of orange-coloured flowers having a white lip with some purple dashes and a green-tipped spur; Java; H. Witte.—*Dendrobium linearifolium*, Teysm. & Bin. (p. 618), a neat looking plant, with ovoid fusiform pseudobulbs, from

which proceed a slender shining stem, with linear bidentate leaves, and numerous white flowers with radiating purple-mauve veins on the side lobes of the lip; Sumatra; H. Witte.—*Crinum zeylanicum reductum*, Baker (p. 618), a dwarf compact-growing and very floriferous hothouse bulb from Zanzibar; the bulb is two inches in diameter, with a two-inch neck, ensiform ciliated leaves, and peduncles under a foot long, supporting umbels of four green-tubed white flowers having a red central band, and declinate stamens; Kew.—*Medinilla Curtisii*, Hort. (p. 621, fig. 108), a pretty Sumatran dwarfish stove shrub, with sessile fleshy ovate acuminate leaves, and abundant cymes of small white flowers, the bunches of which are coral-coloured, quadrangular, and right-angled; Veitch & Sons.—*Euphorbia canariensis*, Lin. (p. 628, fig. 112), a portrait of a fine tree of this remarkable cactus-like spurge, growing in the Botanic Garden at Capetown, S. Africa.

The BOTANICAL MAGAZINE for November contains coloured figures of the following subjects:—*Sarmienta repens*, R. & P. [t. 6720], a small creeping half hardy or cool greenhouse plant, with slender flexuous branching stems, ovate leaves, and pendulous scarlet ventricose-tubular flowers nearly an inch long; introduced some 20 years since from Chili; Veitch & Sons.—*Rhamnus libanotica*, Boiss. [t. 6721], a deciduous shrub, of robust habit, having oblong or ovate leaves rounded at the base, and denticulate at the edge, and small cymes of minute green flowers in June; Asia Minor and Syria; Kew.—*Tritonia Pottsii*, Benth. [t. 6722], a pretty half hardy bulb-tuber, having the bulbs connected by long slender rhizomes, with slender erect branched stems 3—4 feet high, linear green leaves a foot or more in height, and long panicles of funnel-shaped flowers yellow in the lower and deep red in the upper half; known better as *Montbretia Pottsii*; S. Africa.—*Angræcum Scottianum*, Rehb. f. [t. 6723], a pretty slender growing epiphyte with terete rooting stems, semicylindrical recurved leaves, and white flowers with narrow linear sepals and petals, a transverse oblong apiculate lip, and a yellowish-brown spur 4—5 inches long; Comoro Islands; Kew.—*Rosa alpina*, Lin. [t. 6724], one of the most elegant of the single roses, forming a low bush, with slender branches, crowded leaves with large flat stipules, and pink or rose-red flowers 2½ inches across; Pyrenees; Kew.—*Fritillaria pallidiflora*, Schrenk [t. 6725], a hardy bulbous perennial, with a stout stem 6—15 inches high, sessile glaucous green leaves 2—3 inches long, the lowest opposite oblong, the upper lanceolate, with yellowish green drooping flowers, one to six from the axils of the upper leaves; Siberia; Kew.

GARDEN GOSSIP.

— A supposed new species of POTATO, *Solanum Ohrondi*, has recently been discovered by M. Ohrond, a surgeon in the French navy, in the island of Goritti at the mouth of the River Plate, and its introduction into the French Gardens is announced and the plant figured in a recent number of the *Revue Horticole*. From observations already made great expectations are raised as to the value of the novelty as an esculent, either by process of improvement or by intercrossing with the *Solanum tuberosum*. The plant is described as very dwarf in habit, about a foot high, vigorous, with erect reddish-purple hairy stems, irregularly pinnate leaves, and small corymbs of flowers, which are whitish-lilac inside and purplish-blue outside. The underground stolons are numerous, filiform, those nearest the surface producing new stems; while the tubercles are scattered, oblong or irregularly

subspherical, attaining upwards of 3 in. in length, and 2 in. in diameter, the flesh being pale yellow, and the flavour sweet. M. Blanchard, who has cultivated this Potato at Brest, where he finds it quite hardy, since 1880, states that it is almost impossible to destroy it, owing to its habit of producing underground stolons; and he asserts that already the tubers show a tendency to increase in size, and that the plants have not been attacked by disease. M. Carrière, who has grown the plant at Montreuil, near Paris, states that with him the growth is nearly continuous, so that under favourable circumstances two crops of tubers have been yielded in one season. The tubers are waxy when cooked, and a little acid in flavour, like potatoes which have become green by exposure to light; but there seems every reason to believe that the plant is susceptible of improvement, and that it may prove serviceable either directly as a wholesome addition to our stock of esculents, or indirectly as furnishing new materials for hybridisation. Naturally the plant grows in soil of a sandy character, and in a temperate climate which has marked seasonal fluctuations and a cool summer.

— **ANOTHER** New Vegetable, the KUMARA, which may prove to be cultivable in this country, has lately been introduced in a living state from New Zealand, to Kew Gardens, with a view to its experimental cultivation and dispersion. The Kumara, a kind of sweet Potato, is the *Convolvulus chrysorrhizus* of Forster, and possibly only a race of *Ipomœa Batatas*, so widely cultivated in the Pacific Islands and elsewhere. The earlier voyagers, who paid attention to the vegetable productions of New Zealand, speak very highly of the plant, which was cultivated with great care by the Maories. For several years Sir Joseph Hooker has been trying to introduce it into this country, and some tubers sent to Kew this year have grown and increased, and the small crop of tubers obtained has been widely distributed, so that the value and capabilities of the Kumara in Europe may be fairly tested. A woodcut figure of the small oblong tubers, three inches long, is given in the *Gardeners' Chronicle*, xxi. 601, fig. 107. The flavour is said to be that of a good sweet Potato, over which it has the advantage of a convenient size, resembling more in this respect the common Potato.

— **WE** learn from Mr. Sander that a wonderfully fine specimen of VANDA LOWII (*Renanthera Lowii*) is now to be seen in the collection of Baron Hruby at Peckau, in Austria. This plant is unique in its size and splendour. A young plant of the species was given to the Baron's father by the late Mr. Kramer, of Hamburg, some twenty years ago, and about five years since Mr. Kramer received in return a plant from Baron Hruby taken from the plant now at Peckau. The stately and magnificent specimen in the Baron's collection is in robust health, a large quantity of thick roots springing in all directions from the plant and falling around it, reminding one of the thin branches of the drooping Ash in winter. The centre stem is furnished with eight branches, two of these again have a side shoot, and from the base of the plant grow eleven young ones, hence this marvellous specimen consists of twenty-one plants and breaks, all coming, of course, from the one specimen. There are twenty-two flower-spikes on the plant, and the variety being one of the finest brightly marked ones, and the blotches dark and shining, the sight produced is really extraordinary. So much is it appreciated that horticultural societies from far and near

in Austria have made arrangements to view it. The collection at Peckau is under the able management of Mr. Skopec, and is a very extensive one. In culture the plants stand second to none on the Continent; for years past the finest species and varieties have been collected. The present Baron follows in the footsteps of his father, who was an ardent admirer and grower of Orchids, and his efforts to bring their culture to perfection have been crowned with great success.

— **THE SHOWS OF THE ROYAL BOTANIC SOCIETY** during 1884, are fixed to take place on March 26, and April 23 for Spring flowers, and on May 21 and June 18 for Summer flowers and Fruits. The evening *fête* is put down for July 2.

In Memoriam.

— **MR. JOHN LAING** died at Pitcairnie on October 23, in his 75th year. He had been for 49 years head gardener at Pitcairnie, and was much esteemed and deeply regretted by his employer. For a long period he was known as one of the most successful gardeners in Scotland, as evidenced by the marvellous crops of Grapes, Muscats especially, which he annually grew, and by his high-class kitchen gardening.

— **SIR W. SIEMENS** died from the effects of a fall on November 18, in his 61st year. It has been well said that he was one of the most brilliant scientific men of this century, and a striking exemplar of those to whom Great Britain owes her prosperity—those who being thoroughly versed in abstract scientific principles, are capable of applying them to practical ends. In his relations to Horticulture, it may be mentioned that he was the first to apply the electric light as an agent in the forcing of Fruits.

— **MR. JAMES GRAY, F.R.H.S.**, died at his residence Danvers Street, Chelsea, on November 24, at the age of 73 years. Brought up as a gardener, Mr. Gray has for many years been in business as a horticultural builder, in which, owing to his horticultural training, he was very successful. Latterly he has been in failing health, and at last, after a few days illness, succumbed to an attack of bronchitis. He was held in the greatest respect and esteem, not only by his personal friends, but by horticulturists generally. We learn that the business will be carried on by his son, Mr. Alfred Gray.

— **MR. JOHN FLEMING, F.R.H.S.**, of Cliveden, Maidenhead, died on November 26, after a short illness. The name of our old friend and correspondent will always be honourably associated with the magnificent gardens at Cliveden, where formerly, now dating back about 30 years, under the patronage and guidance of the late Duchess of Sutherland, Spring Gardening was carried out by him, to a high degree of perfection, and on a scale which at that time was unapproached elsewhere. Mr. Fleming, who has been an occasional contributor to our pages, was a thoroughly practical man, and one of our foremost gardeners, on which account he was selected in 1862 to fill a seat on the Council of the Royal Horticultural Society in those days when practical men were welcomed at that board. He was most highly esteemed and will be deeply mourned by his numerous personal friends.

Dr. Dr.

